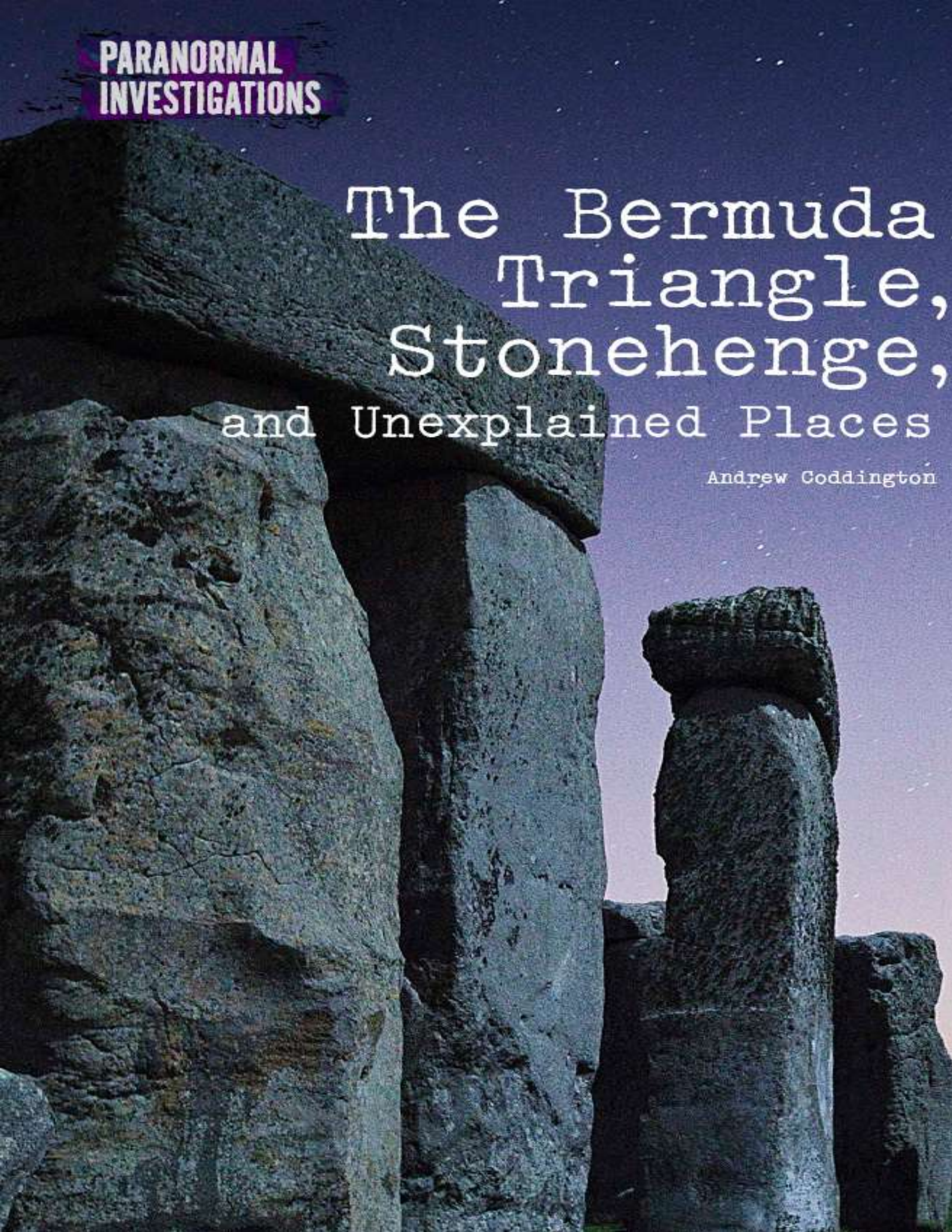
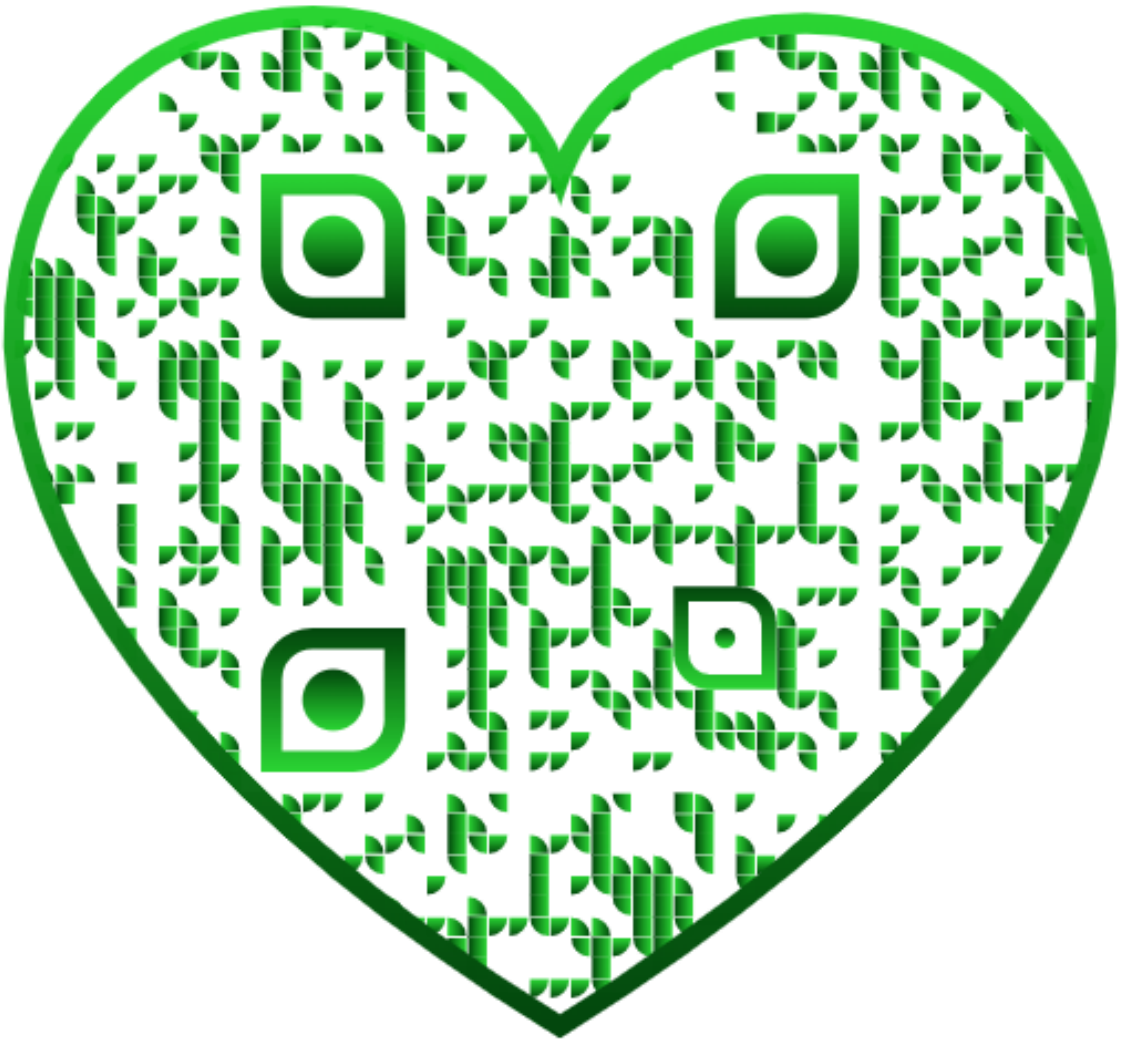
PARANORMAL INVESTIGATIONS

# The Bermuda Triangle, Stonehenge, and Unexplained Places

Andrew Coddington





# Contents

**Introduction:** A Dive into History

**Chapter One:** The Graveyard of the Atlantic

**Chapter Two:** Exploring the Bermuda Triangle

**Chapter Three:** The Hanging Stones

**Chapter Four:** Secrets in Stone

**Chapter Five:** Mysteries Persist

Glossary

Further Information

Bibliography

Index

Although science has shed light on many of the world's mysteries, there are several places, such as Stonehenge, that remain unexplained.

## INTRODUCTION

# A Dive into History

Humans have been exploring the world around them since our ancestors first stepped out of caves and into the open air. At first, many did so in order to find resources to live a better life. Scientists believe that today's species of humans, called *homo sapiens*, which in Latin translates into "wise man," first originated in Africa approximately two hundred thousand years ago. These early humans spread out from their homelands in search of areas with more fertile soil, better hunting, a more comfortable climate, or to get away from rival clans. This migration took humans out of Africa and into the Middle East, and from there to Europe and Asia and, eventually, all the way to the Americas, and even remote islands in the Pacific Ocean. Today, humans live on every continent, including Antarctica, the coldest and most hostile place to humans on Earth.

Movement seems like an innate human need. As the saying goes, the grass is always greener on the other side of the fence, and so people press on, exploring new lands. In today's world, however, it seems like the entire planet has already been explored. People romanticize about the great European Age of Exploration, lasting between the fifteenth and seventeenth centuries. During this time, people wondered what existed outside their narrow scope of the world, imagining lands filled with untold riches and protected by seas haunted by monsters. Sailors and sea captains left their

homes to sail into the unknown, uncharted waters that lay beyond the horizon. Today, it would seem their work is complete. Humans instead have turned their attention to space, calling it the “final frontier.” Global positioning system (GPS) satellites orbit Earth, charting every possible corner of the world, and scientists working around the world have categorized and explained all of the world’s mysteries … Or have they?

A network of global positioning system (GPS) satellites orbiting Earth has documented every corner of our planet’s surface.

## Mysteries of the Deep

As much as we have already explored, we still have a narrow scope of the world. For example, living on land, it may seem like we have a pretty clear understanding of the world we find ourselves in. If one looks at a map of their home country, the United States or Canada for example, it may seem like those countries take up a huge amount of Earth’s surface. This isn’t

wrong: the United States and Canada both take up about 3.8 million square miles (9.8 million square kilometers) each. However, the whole world measures approximately 197 million square miles (510 million sq km), and over 70 percent of that is water. This means that nearly 140 million square miles (360 million sq km)—or eighteen times the area of the United States and Canada *combined*—is water.

Water, unlike land, takes up three-dimensional space. Generally speaking, a person on land can only move around on one plane—horizontally—but a creature in the water can travel in two planes—horizontally and vertically. This is because water, unlike land, has depth. Most of the water on Earth is contained in the oceans. The average depth of the ocean is about 12,100 feet (3,688 meters), or 2.3 miles (3.7 kilometers), but there are even greater depths. The deepest part of the ocean is called the Challenger Deep, which is located along the southern end of the Mariana Trench in the Pacific Ocean. Here, depths reach up to a staggering 36,200 feet (11,033.76 m), or 6.8 miles (11 km).

Oceans are obviously big places, so it should be no surprise that we have explored only the barest sliver of them. Even with all of humanity's advanced technologies, such as sonar and manned and unmanned submarines capable of withstanding the crushing pressure experienced at great depths, we have only explored a measly 5 percent of the seas, according to **oceanographers**. This means that humans have little to no idea of 95 percent of the oceans surrounding our continents.

## Ancient Mysteries

What is contained in the expanse of the oceans is just one of the world's many great mysteries, and one of the greatest puzzles revolves around something else entirely: ourselves. As much as we don't understand about the seas, there is perhaps even less that we know about the history of humanity itself. As previously mentioned, *homo sapiens* have been on Earth for thousands of years. However, humans have only been able to record their histories through writing for a fraction of that time. Writing was invented first in 3200 BCE in Mesopotamia in modern-day Iraq, and later independently by the Mesoamerican culture known as the Olmecs in 600 BCE. This means that humans have only been able to record their histories through writing for

barely more than $^{1}/_{100}$th of the time they have been on Earth.

Archaeologists, such as these digging in Orkney off the coast of Scotland, work to explain the parts of ancient history that have been lost to us.

Not everything about humanity's early history is completely dark, however. Fortunately for people interested in **anthropology**, or the study of human cultures, written history is not the only source for knowledge about ancient peoples. Ancient people, intentionally or not, left clues about their cultures that help shed light on humanity's origins and the paths that our ancestors took to where we are today. These clues assume many forms, including physical artifacts such as pottery, tools, and weapons; human remains, such as bones and mummified or otherwise preserved bodies; and artwork, such as jewelry, cave paintings, and stone arrangements. Whether it seems obvious or not, each of these things tells a story. When anthropologists

discover such clues, they approach them like a crime scene investigator might. They ask questions such as: Who left this here? Why? Who made it and when? What purpose did this object serve? In answering these questions, scientists put together a picture, bit by bit, of the object, the person who used it, and the roles both of them played in their societies.

## Unexplained Places

Of the world's greatest mysteries, two have proved perpetually puzzling to people throughout the ages. Each of these come from the great unexplored corners of the sea and human history. They are the Bermuda Triangle and Stonehenge.

As little as we know about the ocean in general, there is one thing that's certain: something isn't quite right in the area between Bermuda, Florida, and Puerto Rico. These three points make up what is known as the Bermuda Triangle or, sometimes, the Devil's Triangle. Unexplained occurrences have been happening in this approximately 1.5-million-square-mile (2,414,016 sq km) stretch of the Atlantic Ocean since as early as 1492, when Christopher Columbus was exploring the region in search of a westward passage to India. Since then, the Bermuda Triangle has been the site of an unusually high number of maritime tragedies: dozens of ships and planes have wrecked here, and there are even several cases of disappearances. Somehow, people, crews, and even whole ships and planes have been known to vanish—all without sending out distress signals, all without leaving a trace.

In addition to the Bermuda Triangle, another of the world's most awe-inspiring unexplained locations is Stonehenge. Located in Wiltshire, England, Stonehenge is a prehistoric monument dating back to about 2500 BCE. It consists of a ring of **menhir**, or standing stones, which are placed in earthen mounds. Just because Stonehenge can be found on good old terra firma does not mean it is any less of a mystery than the Bermuda Triangle. Everything from its construction, materials, and purpose seems to defy explanation, and the closer scientists look at the **megalith**, the more questions it seems to pose. How was it that a prehistoric people lacking common tools managed to mine, transport, and erect the stones, each of which weighs about 25 tons (23 metric tons)? How did this ancient culture manage to build a monument that seems to correspond so accurately with the movement of the solar system? Why was it built? And why have **cremated** human remains been found throughout the

site?

Humanity has advanced so far, so quickly in its relatively short time on Earth. There is no doubt that our technologies and intellect have earned our species the name “wise man.” However, it is all too easy for people to think that impressive technology and intellect have made us masters of the world around us. The reality is that for as much as we know, there remains many times more that we do not know at all. Between the depths of the ocean and the depths of humanity’s collective memory, there are still mysteries left in the world. It’s time to take a deeper dive.

Despite modern humans' advanced technology, 95 percent of the ocean remains unexplored.

The Bermuda Triangle has been the site of countless shipwrecks, plane crashes, and disappearances.

CHAPTER ONE

# The Graveyard of the Atlantic

The Bermuda Triangle has been the stuff of legends and folktales for centuries, but despite some of the more outlandish yarns, the fact remains that the 1.5 million square mile (2,414,016 sq km) wedge of the mid-Atlantic has claimed the lives of thousands of pilots and sailors. In the past one hundred years, more than one thousand souls have been lost in its waters, and on average, five aircraft and twenty-five sailing vessels disappear every year.

## A History of Mystery

Stories about the unusual nature of the Bermuda Triangle are as old as the recorded history of the area. Christopher Columbus, who explored the Americas during his famous voyage in 1492, reported witnessing strange happenings during his leg through the waters between Florida, Bermuda, and Puerto Rico. Among these occurrences were unexplained malfunctions of his navigation equipment as well as startling lights that appeared in the sea. (For more, see: “Columbus’s Voyage” on page 16.)

Columbus’s journey to the Caribbean (which he called the West Indies, and its inhabitants Indians, because he mistakenly believed he had landed in

India and not an entirely new continent) sparked intense interest among the rulers of Europe's most powerful nations. All of them wanted to colonize these new lands and exploit their wealth. As a result, sea traffic between Europe and the Americas exploded in the sixteenth and seventeenth centuries. Oceangoing ships transported colonists from Europe and Africa to the New World, and wealth and raw materials from the New World back to Europe. This process was known as the Triangular Trade and made the European nations that colonized the West Indies wealthy—at the expense of Africans and Native Americans.

It is unclear how many other ships experienced unusual events in the Bermuda Triangle as Columbus had, though it seems likely that many did given the increase in traffic in the area immediately following Columbus. It is customary for ships to keep a **log**, which is a daily record of the ship's position, weather and other atmospheric measurements, and notable events onboard. Logs are primarily tools for insurance purposes, since ships and their cargoes are expensive investments that their owners want to protect. However, logs also provide interesting information to historians about the day-to-day life aboard vessels, acting almost like a ship's diary. Unfortunately, many ships' logs, like countless other historical documents, have been lost or destroyed in the decades and centuries since they were written.

Outside of Columbus's log, there is little concrete evidence about the early history of the Bermuda Triangle, but there is one story of note. It concerns a man named Thomas Lynch Jr., who was born in the British colony of South Carolina in 1749. Lynch represented his home state at the Second Continental Congress and even signed his name to the Declaration of Independence in 1776 before falling ill. In 1779, Lynch endeavored to travel to France to seek therapeutic treatment for his sickness. However, having just committed treason, Lynch knew he could not cross the Atlantic in an American ship, so he sailed south to the West Indies, where he expected to board a neutral ship. Unfortunately, Lynch's yacht never reached its destination, and no part of the ship was ever recovered. Lynch's passage from South Carolina to the Caribbean would have taken him directly through the Bermuda Triangle, however, leaving some to wonder.

## The Last Voyage of the USS *Cyclops*

One of the most tragic stories attributed to the mystery of the Bermuda Triangle revolves around the USS *Cyclops* in World War I. *Cyclops* was a US Navy collier, a cargo ship designed to transport coal, which was the primary fuel for naval ships at the time. On January 8, 1918, *Cyclops* departed Norfolk, Virginia, for Rio de Janeiro, Brazil, with nearly 10,000 tons (9,071 metric tons) of coal to supply allied British ships operating in South America. On February 15, she departed Rio de Janeiro laden with 11,000 tons (9,979 metric tons) of manganese ore (manganese is used in the manufacture of steel), stopping briefly in Bahia, Brazil, before departing for a nonstop voyage to Baltimore, Maryland. The *Cyclops* was forced to stop at the Caribbean island of Barbados, however, because her captain complained that the starboard (right-side) engine had catastrophically malfunctioned, reducing the ship's speed to 10 knots, potentially as a result of being overladen in Brazil. The navy suggested that the *Cyclops* return to the United States for repairs. The passage from Barbados to the US mainland would have taken the *Cyclops* clear across the Bermuda Triangle, with Barbados lying southeast of the triangle's east side. She departed Barbados on March 4 and was due March 13.

## COLUMBUS'S VOYAGE

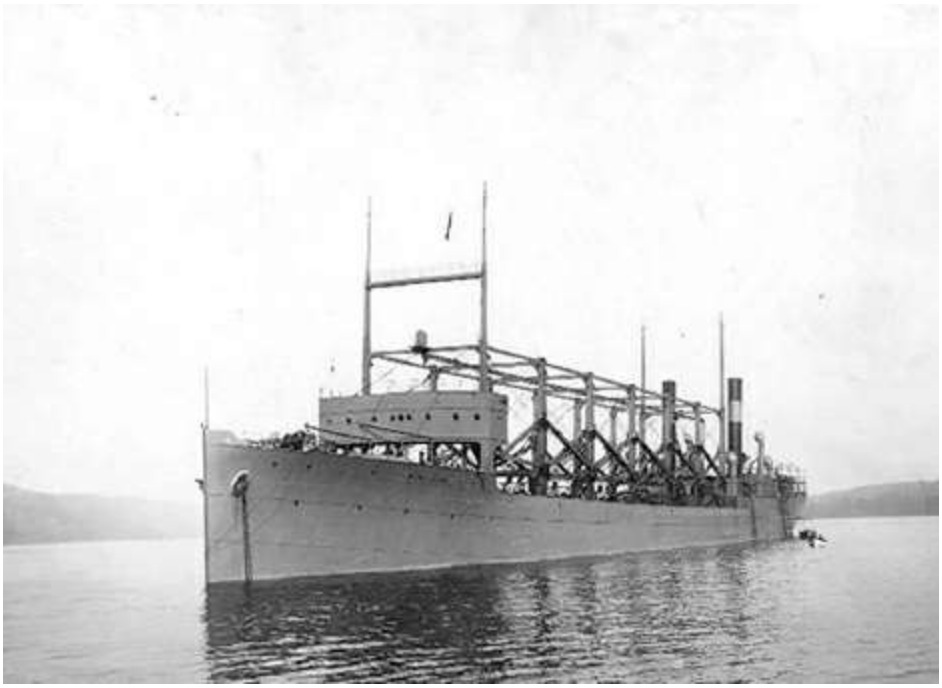
Christopher Columbus sailed through the Bermuda Triangle on his voyage west across the Atlantic in 1492. By the time his fleet returned to Europe, his log was full of incredible stories about new lands and peoples. Among the most puzzling entries, however, occurred in October 1492, while Columbus's fleet was sailing through the waters between Florida and Bermuda. Columbus noted that his compass, which had faithfully pointed toward the North Star the whole voyage, now pointed several degrees to the left. Although that may seem like a relatively minor difference, such a malfunction could prove disastrous to fifteenth-century navigators sailing through uncharted waters. It's possible that even a minor variation in a ship's heading, or direction, could lead the crew many hundreds of miles off course over several days and possibly

leave them hopelessly lost at sea. Fortunately for Columbus, he was able to catch this anomaly and adjust for the mistake.

In addition to the unusual behavior of his navigational instruments, Columbus and his crew witnessed something shocking in the waters of the Bermuda Triangle. On October 11, Columbus and at least one other crew member saw a ball of light that seemed to rise from out of the sea. According to the ship's position, they were too far from land to have been able to see a light from shore.

Modern **skeptics** who have read Columbus's account argue that the light probably came from either a meteor crashing into the sea or possibly the rare but natural **phenomenon** known as ball lightning. Ball lightning is a phenomenon in which static electricity in the atmosphere is discharged, but instead of taking the form of a brief bolt of lightning, it takes the form of an orb that can be up to several inches in diameter. Unlike regular lightning, which dissipates almost instantly, ball lightning can appear for up to several minutes and has been documented to behave erratically. For example, some pilots report having been "chased" by orbs of light; these are likely ball lightning, whose electrical charge is attracted to the bodies of aircraft.

This map illustrates the Bermuda Triangle.



The USS *Cyclops* in 1911, seven years before it disappeared without a trace

The ship never arrived. She and her crew of 309 were lost at sea, disappearing without a trace.

A ship carrying molasses allegedly sighted the *Cyclops* off the coast of Virginia on March 10, three days before she was due to arrive. However, the navy concluded that this was impossible since the ship had approximately 1,800 nautical miles to travel between Barbados and Baltimore, all on a crippled engine. Investigators concluded that the *Cyclops* suffered from a convergence of factors that resulted in its tragic loss. Because the ship's starboard engine was inoperable, it had to rely exclusively on the propulsion of its engine on the opposite side, the port (left) side. Should that engine suffer damage or fail entirely, the *Cyclops* would be stranded at sea. Adding to that, the *Cyclops* had suffered damage to her hull on a previous voyage, which meant that she was likely taking on water. Additionally, her design

made her susceptible to rolls on the ocean, a problem that may have been compounded by improperly stored cargo that the *Cyclops* had taken on in Rio. As a ship travels on the water, it has a tendency to roll, or pitch from one side to the other on its axis. Although this is normal, some ships can roll to extreme degrees, which creates the risk of **capsizing**. This problem can be exacerbated on ships with large cargoes, such as the *Cyclops*, because that weight can become improperly balanced on a journey, increasing the likelihood of more extreme rolls and affecting a ship's buoyancy. Many investigators believe that the ship had slowly been taking on water during its voyage, which went unnoticed by the ship's watch stationed in the bridge high above the hull until it was already too late. Combined with the sudden onset of a second engine failure or a violent **squall** (or both), the *Cyclops* would have been lost in a matter of minutes.

The sinking of the USS *Cyclops* constitutes the greatest loss of life aboard a US-built ship in the history of the US Navy with unknown causes. Although many theories exist, there is no direct evidence to explain what happened and for what reasons. Most puzzling of all, however, is the fact that no piece of the wreck has ever been discovered, and its location remains unknown.

The wreck of the *Cyclops* prompted President Woodrow Wilson to remark, "Only God and the sea know what happened to the great ship."

## Flight 19

Losses of sailing vessels are not the only tragedies that have been attributed to the Bermuda Triangle. Many aircraft have been known to disappear without a trace.

One such airborne mystery concerns Flight 19, a squadron of fighter planes that disappeared over the Bermuda Triangle. On December 5, 1945, five Grumman TBM Avenger Torpedo Bombers departed from the US Naval Air Station (NAS) in Fort Lauderdale, Florida, on a routine training mission in the skies above the Atlantic. Their route was designed to take them 150 miles (241 km) east, then 40 miles (64 km) north before returning to base. All told, the exercise was supposed to take about two hours.

GOOD EVENING
It's usually a shambles of papers when it's all wrapped up in words.

# MOUNT CARMEL ITEM

WEATHER
Rain ending tonight. Friday fair and warmer.

EXCLUSIVE LEASED WIRE DISPATCHES OF THE UNITED PRESS ASSOCIATIONS

VOL. LIX. NO. 19. MOUNT CARMEL, PA., THURSDAY, DECEMBER 6, 1945. PRICE—FOUR CENTS.

# FIVE NAVY BOMBERS VANISH

## BEHIND THE HEADLINES

**Germany Keystone On Reconstruction**

BY DAVID F. SCHOLER

German resources must be utilized, a mandate to the peoples of reconstituting Europe.

That is why the Big Three—Britain, the United States and Russia—have held in mild a few days ago concerning the Germans to assume some kind of normal government of their own. The decade now seems to be in the process of being laid aside by common consent.

Kenya, including Germany, has refused into a world which possesses overwhelming and untold variation. The initial consequences may at least partially and drastically account on the continent in basis of production is not restored in Germany and satisfactory duties (Ruhr) commercial lines recaptured that it must be involved in Germany since the leading industrial there cannot be removed from the heart of the continent without disastrous consequences both industrially and long-range.

The French have been accused in official Allied circles recently because of dividing progress to any common ground to consent to a centralized German Government without what amounts to dismemberment of various Germans.

The French however have cause for what is to them an unanswerable argument against creating a new German Government which will again control the most industrial area on either side of the Rhine, with their warmaking potentialities.

The regions concerned are the Ruhr, the Rhineland and the Saar. The French have announced and still maintain to the face of strong pressure from the Big Three, that these areas should be detached permanently from the Reich and placed under international control.

Alternative to the French view, Germany could again become the strongest industrial nation in Europe within a few decades, and could once more attack France under a war-minded government.

The French people cannot forget the three German invasions of their soil in Germany within 70 years, and they are not likely to let any French Government forget it, whether headed by President Charles de Gaulle or someone less hard-minded by comparison.

An authoritative French spokesman, interviewed but reservedly representing the official viewpoint, was quoted in a United Press cla-

(Continued on Page Eleven)

## Over $1,500 To be Cleared For Memorial

**Net Proceeds Bigger Than Anticipated After Benefit Game**

Nearly over $1,500, a couple of hundred dollars more than previously reported, will be cleared on the recent Mount Carmel-Mount Carmel Township-Locust War Memorial Fund preseason benefit football game, it was learned today in officials of the Mount Carmel Public Schools Recreation Service to give the community a memorandum-referred meeting in town that is a useful and lasting monument in tribute to servicemen who sacrificed in days of war.

With arrivals from the Federal Tax on tickets and for use of a scoreboard clock at separate classes for the two high school squads are to be paid, the net proceeds from the special event, should well over $1,500, a detailed financial statement issued this morning by

(Continued on Page Eleven)

**HURLEY CHARGES PLOT TO OUST CHIANG**

Shielding his eyes from glare of photographers, U. S. Ambassador Patrick J. Hurley, resigned U. S. ambassador to China, testifies before the Senate Foreign Affairs Committee in Washington, Dec. 6, charging career diplomats in China, and by George Atcheson, Jr., wanted to give Red-front arms to Chinese Communists with the deliberate purpose of destroying the Chiang Government of Generalissimo Chiang Kai-shek.

## HURLEY CHARGES POLICY IN IRAN WRECKED BY ACHESON

WASHINGTON, Dec. 6 (U.P.)—PATRICK J. HURLEY charged today the Senate Foreign Relations Committee today that Undersecretary of State Dean Acheson had wrecked U. S. foreign policy in Iran.

The request dumbfounded to China without the usual of his assignment from state Department personnel to execute diplomatic activities in Iran.

When he resigned last week, Hurley accused State Department career men of sabotaging U. S. policy in China. It was to-date Three charges that he was sandwiched before the Senate committee. He reiterated the charges yesterday, naming Dr. Foreign service officials, and restated in the attack today.

Questioning of Committee Chairman Tom Connally, D., Tex., Hurley said persons in the State Department had "subverted and sabotaged American policy in Iran," where the Indian government is now trying to put down a revolt.

Hurley also went on a diplomatic mission to Iran for the late President Roosevelt's return he became ambassador to China.

Asked by Connally who in the State Department was responsible for sending U. S. policy in Iran, Hurley said: "The men who have betrayed."

At first did yesterday, Hurley and Connally clashed frequently. Hurley insisted he was not attacking the administration. He said he probably would wind up on the side of President Truman. He volunteered the statement that he had never met Secretary E. Wright, Jr., the man who immediately to block Acheson's appointment as undersecretary.

Hurley told the committee that "on the direction of President Roosevelt" he requested "What is known as the Declaration of Three Powers on Iran."

He said the agreement is to, Prime Minister Joseph Stalin, Mr. Roosevelt, and former Prime Minister Winston Churchill recognized Iran's contribution to the war effort in permitting supplies to be moved across the country to Russia. They agreed that any economic problem confronting Iran at the end of the war would be given "the consideration" as international settlement.

The statement said the three powers were "in one" in recognizing the sovereignty of Iran in accordance with the Atlantic charter.

Hurley asserted only gentlemanly acts of the agreement had been published while, Under short-cuts-circumstances by Russia, the agreement was not announced. "Are you testifying as to

(Continued on Page Eleven)

## M'Vay Ordered Ship Abandoned

WASHINGTON, Dec. 6 (U.P.)—Capt. Charles B. McVay, III., ordered his officers and men to abandon the stricken Cruiser Indianapolis, a Navy court martial was told today.

McVay is charged by the Navy with failing to take "timely action" to abandon the ship before it sank with the loss of 880 of the 1,196 men who had been aboard.

Commander Edward H. Kraus of Antigo, Wis., testified at McVay's court martial that he was standing on the bridge following the two explosions which caused the ship to go down within 12 minutes.

Asked if he saw McVay on the bridge, Kraus replied that the commanding officer was on the bridge immediately following the explosions.

"When orders did he give?"

"He gave no orders to abandon ship. He followed down from the bridge to the main deck, then started climbing up the ship's port side."

Kraus, who was standing watch on the bridge, then went down decks to check the ship's bow, turned and made soundings when the ship first its explosions had disappeared and reported.

He said he saw no submarine or low speed when suspected because the ship was zigzagging on the ship's port side.

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Lt. Lincoln John Reid of New London, Conn., ship's supply officer, said he heard an explosion "at the rear of the ship."

King's Regent Consul H. Mack of Hudson, Fla., said the ship's zigzagging by the order necessary to prevent submarine attack. He said he heard two explosions about 12:05 a.m. and saw the ship sink about 20 minutes later.

Mack said he saw a number of men in the water. He said he saw Capt. McVay on the bridge.

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The mysteries surrounding the loss of Flight 19 caught the attention of newspapers across the United States.

The squad was led by Lieutenant Charles Taylor, an experienced airman with approximately 2,500 hours logged in the air and who had recently completed a tour of duty in the Pacific theater of World War II aboard the US Navy aircraft carrier USS *Hancock*. Taylor was also an experienced instructor, having moved from the Naval Air Station in Miami where he gave certification training courses similar to the one at NAS Fort Lauderdale. Meanwhile, each of Taylor's thirteen students had logged about 300 hours each; though far from experienced, it is safe to say the men were not unfamiliar with being in the air.

The squad was cleared for takeoff after a preflight inspection revealed that the aircraft were all in order. The only thing missing from each plane was a twenty-four-hour flight clock. This was intentional, as the purpose of the mission was to instruct the airmen in "dead-reckoning," in which a pilot uses his speed, elapsed time, and bearing to calculate his position—handy in the case of a systems malfunction. As such, it was assumed that each man wore his own wristwatch. The weather report from Fort Lauderdale seemed to promise a pleasant flight, describing conditions as "favorable." At 2:00 p.m., the squadron took off, bound for the Atlantic.

An hour into the flight, things started to deteriorate. It seems that at some point during the squadron's turn to the north, Taylor got turned around. According to testimony from another flight instructor leading training in the area, Taylor's squadron was in distress. This instructor made contact with Taylor, who said, "Both my compasses are out, and I am trying to find Fort Lauderdale, Florida. I am over land but it's broken. I am sure I'm in the Keys, but I don't know how far down, and I don't know how to get to Fort Lauderdale." The squadron's route had them traveling north, but the Florida Keys are due south of Fort Lauderdale. If Taylor's judgment was accurate, they were hundreds of miles off course and traveling in the wrong direction.

The story of Flight 19, which, having been told countless times over the years and has since veered perhaps into legend, goes like this: An hour and fifteen minutes into the flight, the tower at the airbase received a call from Lieutenant Taylor—but not to request landing instructions. Taylor reported,

“Cannot see land … We seem to be off course.”

The tower, confused that the flight could be lost given the favorable weather, requested the flight’s position. Taylor responded, “We cannot be sure where we are. Repeat: Cannot see land.”

The tower then lost contact with the group. Ten minutes later, the connection resumed. The leader called in, saying, “We can’t find west. Everything is wrong. We can’t be sure of any direction. Everything looks strange, even the ocean.”

Once again, there was silence—this time lasting for twenty minutes. Once the tower reestablished contact, Taylor was no longer speaking. For reasons unknown, Taylor relinquished his command of the squadron to one of his subordinates. This man radioed in: “We can’t tell where we are … everything is … can’t make out anything. We think we may be about 225 miles northeast of base.” The new leader began gibbering incoherently before saying, “It looks like we are entering white water. We are completely lost.” Flight 19 never made contact again.

Although it is questionable how much of the legend of Flight 19 overlaps with the true story, the fact remains that the five aircraft and fourteen men who made up Lieutenant Taylor’s squadron were downed in the waters of the Bermuda Triangle on what should have been a routine training exercise led by a capable instructor. What seems likely is that Taylor got turned around at some point during the exercise due to his compass malfunctioning. In order to get his bearing, he mistakenly took an island chain—most likely the cays in the Bahamas, west of Florida—for the Florida Keys. The tower likely took Taylor, an experienced navigator, at his word, and told him to put the setting sun to his port wing and head north past Miami to Fort Lauderdale; but if Taylor was actually in the Atlantic, doing so would have taken him and his men further out into the Atlantic Ocean where they would have run out of fuel and crashed.

Although it seems likely that human error played a significant role in the disappearance of Flight 19, there is still a great deal in the official US Navy report that remains unexplained. Like Columbus, Lieutenant Taylor reported problems with his navigational instruments. His two compasses, which were duplicated in the interest of redundancy in the event that one malfunctioned and which were both inspected prior to takeoff, were both inexplicably inoperable. And, like the *Cyclops* before it, the exact location of the crash remains unknown. No part of Flight 19—no scrap of metal or debris, no

human remains— have been recovered from any of the planes despite each being equipped with inflatable life rafts and other survival equipment that had been inspected before the flight.

Between the *Cyclops* and Flight 19, something unusual seems to be happening in the area between Bermuda, Florida, and Puerto Rico. Dozens of other similar tragedies have happened there, both at sea as well as in the air, each of which defies easy explanation. In many cases, the vessels and their crews seem to disappear without a trace, swallowed up by the sea, as though the black waters of the Devil's Triangle will protect its secrets.

The Bimini Road, a network of submerged limestone blocks off the coast of the Bahamas, is thought by some to indicate the location of the mythical lost city of Atlantis.

CHAPTER TWO

# Exploring the Bermuda Triangle

Disappearances like the USS *Cyclops* and Flight 19 have helped to fuel the mystery surrounding the Bermuda Triangle. The scale of these tragedies, combined with the fact that the wrecks are rarely—if ever—recovered, has sparked decades of speculation about what is going on in the Devil's Triangle. Such explanations range from the practical to the fanciful and fantastic. Everything from UFOs to interdimensional wormholes has been blamed for the disappearances in the Bermuda Triangle. One of the more outlandish theories, for example, involves the sunken city of Atlantis. Some believe that the Bimini Road, an underwater network of rectangular limestone blocks off the coast of the Bahamas, located due southeast of Miami, indicates the location of the lost metropolis. According to legend, the ancient Atlanteans harnessed energy from powerful crystals; when the city became submerged, these crystals went down with it, and today their awesome powers pulsate beneath the waves, causing mechanical and electrical malfunction in modern vessels.

The Bimini Road theory, along with others, make for some pretty interesting sea stories, but there is no evidence that paranormal technology—

Atlantean, interdimensional, extraterrestrial, or otherwise—is at work in the Bermuda Triangle. Instead, there is a multitude of perfectly normal explanations, ranging from natural atmospheric and oceanic phenomenon to simple human error, that helps explain these disappearances. According to the US Coast Guard, which every year is flooded with requests for information about the area of the ocean, “It has been our experience that the combined forces of nature and the unpredictability of mankind outdo science-fiction stories many times each year.”

## The Sargasso Sea

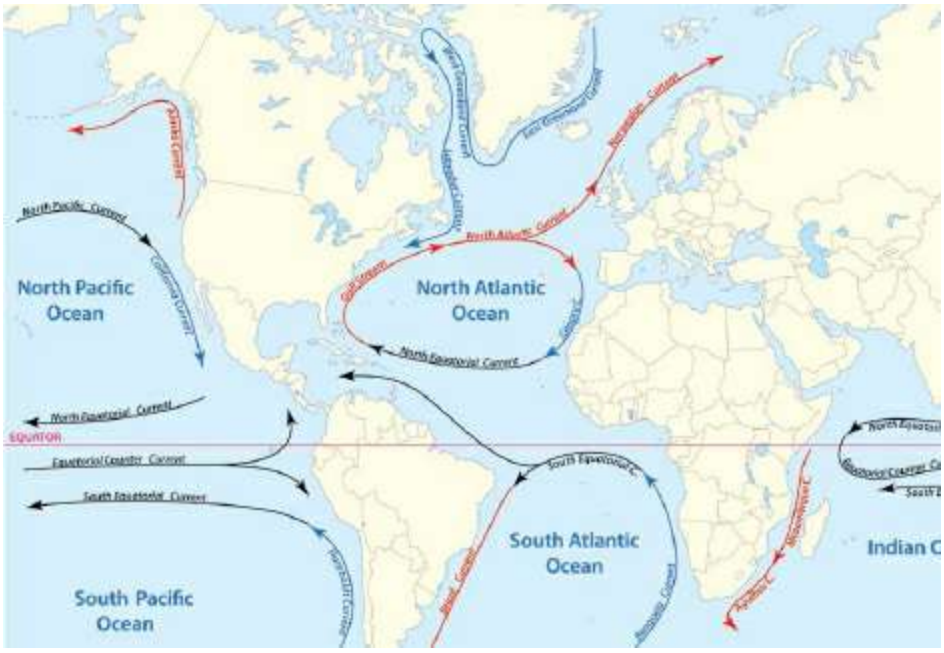
The Atlantic Ocean in the area of the Bermuda Triangle is home to a number of unique but natural oceanic phenomena that may explain why so many ships have wrecked in its waters without a trace. One of these relates to a section of the ocean known as the Sargasso Sea.

The Sargasso Sea is the only sea in the world not defined at least in part by land boundaries. Instead, it is demarcated only by the number of powerful ocean currents that bound it. Its western boundary consists of the Gulf Stream, a powerful, swift-moving current that originates in the equatorial waters of the Gulf of Mexico. Just as warm air rises, the warm waters of the Gulf Stream surge toward the cold waters off Iceland to find equilibrium. Once part of this current has cooled, it turns south toward Africa, where it is again reheated by the equator. This current, known as the Canary Current after the Canary Islands off Africa’s western coast, then heads back toward the Gulf of Mexico. The interplay between these warming and cooling currents forms a rotational system in the Atlantic Ocean known as the North Atlantic Gyre.

The Sargasso Sea—and the Bermuda Triangle—sit almost exactly at the point where these ocean currents converge, which happens to be between Florida and Puerto Rico. The effect this convergence has on sea travel is a study in contrasts: on the one hand, the surface of the Sargasso Sea appears tranquil, allowing a unique species of free-floating seaweed called *sargassum* (from which the sea gets its name) to cover the ocean. Many sailors who have traversed the Sargasso Sea have described it as “eerie” and report feeling ill at ease in its placid waters and vast swaths of seaweed patches that seem to cover the surface like grass. In some places, seaweed is so dense and the air so still that a ship can be left completely motionless—stranded in the

Sargasso Sea.

The calm surface of the Sargasso Sea has made many sailors crossing the Bermuda Triangle feel ill at ease.




The powerful Gulf Stream feeds into the North Atlantic Gyre and may explain why many of the wrecks that occur in the Bermuda Triangle are never recovered.

Meanwhile, beneath the surface, the enormously powerful Gulf Stream violently courses, accelerating around the tip of Florida and the various Caribbean islands. The Gulf Stream is so powerful that it is possible the current could carry a disabled ship, such as the USS *Cyclops*, or the crew of an airplane that had to land in the water from an emergency, such as Flight 19, out to sea. And if those unfortunate vessels are swallowed by the sea, it's possible the current could carry the debris of ships and aircraft several hundred miles north from their original location before they settle to the bottom. Perhaps the reason no debris from the USS *Cyclops* or Flight 19 has been recovered is because it has all been collected in a vast graveyard in the North Atlantic.

# Rogue Waves

The strength of the Gulf Stream may explain why debris from ships and planes that wreck in the Bermuda Triangle are not found, but what causes them to wreck in the first place? One theory points its finger toward a deadly phenomenon: the **rogue wave**. Rogue waves were once considered the stuff of legends and sea shanties. As sailors returned home from long voyages, they described fantastic creatures living beneath the ocean's surface as well as enormous waves that seemed to swallow ships whole like the gaping maw of a monster. It was only recently that scientists have discovered these deadly waves are, in fact, real.

Once the stuff of legends, rogue waves have been documented to reach heights of up to 100 feet (30 m), large enough to sink a boat instantly.

Rogue waves, also known as freak or killer waves, have been described for centuries, and recent scientific documentation proves that these stories are far from legend. Rogue waves are described as sheer walls of water that stretch far higher than surrounding waves. Satellites observing the ocean surface

have shown that rogue waves can reach upwards of 100 feet (30 m) from trough to crest. Perhaps more puzzling and frightening is the fact that rogue waves seem to come from out of nowhere; even a small squall with relatively minor wind speeds can produce rogue waves in excess of 50 feet (15 m) that can come from any direction, even directly against the direction of the prevailing waves.

What causes rogue waves remains largely a mystery. There are at least two possible causes: on the one hand, a rogue wave may form when several smaller waves combine over time to form a progressively larger wave; on the other hand, waves from storms going in one direction may combine with the natural direction of a current to form a rogue wave. One thing is clear, however: because rogue waves are the result of a confluence of a number of chaotic variables, including wind speed and the movement of waves, they are highly unpredictable.

The waters between the Gulf of Mexico and the Atlantic Ocean are notoriously violent, spawning approximately a dozen tropical storms and hurricanes each year as well as countless smaller squalls. It is possible that these storms could cause rogue waves large enough to sink a ship or even grab a low-flying aircraft from out of the sky.

## Magnetic Malfunction

Sailors and pilots from Christopher Columbus to Lieutenant Charles Taylor have reported malfunction in operation of compasses in the Bermuda Triangle. Accounts of these occurrences have been taken by conspiracy theorists as proof that the Bermuda Triangle is the site of unnatural goings-on. However, this is far from the case. Compasses indicate north by way of a magnet; however, the magnet is attracted to what's known as "magnetic north." There is a significant difference between "true north" and magnetic north. True north corresponds to Earth's North Pole, which is a stationary point in the earth's geography. Magnetic north is the point in Earth's magnetism that moves very slightly over the course of thousands of years.

The degree of difference between the static North Pole and the shifting magnetic north is called "magnetic declination," which varies by as much as 20 degrees depending on one's location. Navigators pinpointing their exact orientation on Earth must account for this variation by "declining" the measurement of their compass with the known degree of declination.

Because Earth is a sphere, there are two points on its surface where magnetic declination equals zero. Here, the imaginary line extending from magnetic north overlaps with that of true north. This is called the agonic line and can cause a compass to seem to behave erratically. One of these spots is the Devil's Sea, off the coast of Japan, and the other is—the Devil's Triangle.

Well, at least it used to be …

The agonic line in the Western Hemisphere currently sits in the Gulf of Mexico, but because the agonic line has been known to be moving westward over the last century, scientists estimate that it likely existed over the Bermuda Triangle during the time of Columbus. This may explain Columbus's confusion noted in his log about unusual compass readings.

## THE BERMUDA TRIANGLE IN CONTEXT

There is no question that a large number of ships and planes have wrecked or crashed into the waters of the Devil's Triangle, and more continue to do so every year. This would be unusual if the Bermuda Triangle was the site of the *only* disappearances in the world's oceans, but this is not the case. The fact is that many more go missing all around the world for any number of reasons.

It may seem at first glance that the Bermuda Triangle has an unusually high incidence of disappearance compared to other parts of the ocean; however, it is important to keep in mind that the waters between Miami, Bermuda, and Puerto Rico make up one of the most important and well-used shipping routes in the world. According to historian John Reilly of the US Naval Historical Foundation, "The region is highly traveled and has been a busy crossroads since the early days of European exploration." The Bermuda Triangle may have a large number of tragedies because it is one of the most commonly used routes into and especially out of the Gulf of Mexico, which means that there has been a large amount of traffic sailing through and passing over its waters for centuries. "To say quite a few ships and airplanes have gone down

there," Reilly continues, "is like saying there are an awful lot of car accidents on the New Jersey Turnpike— surprise, surprise."

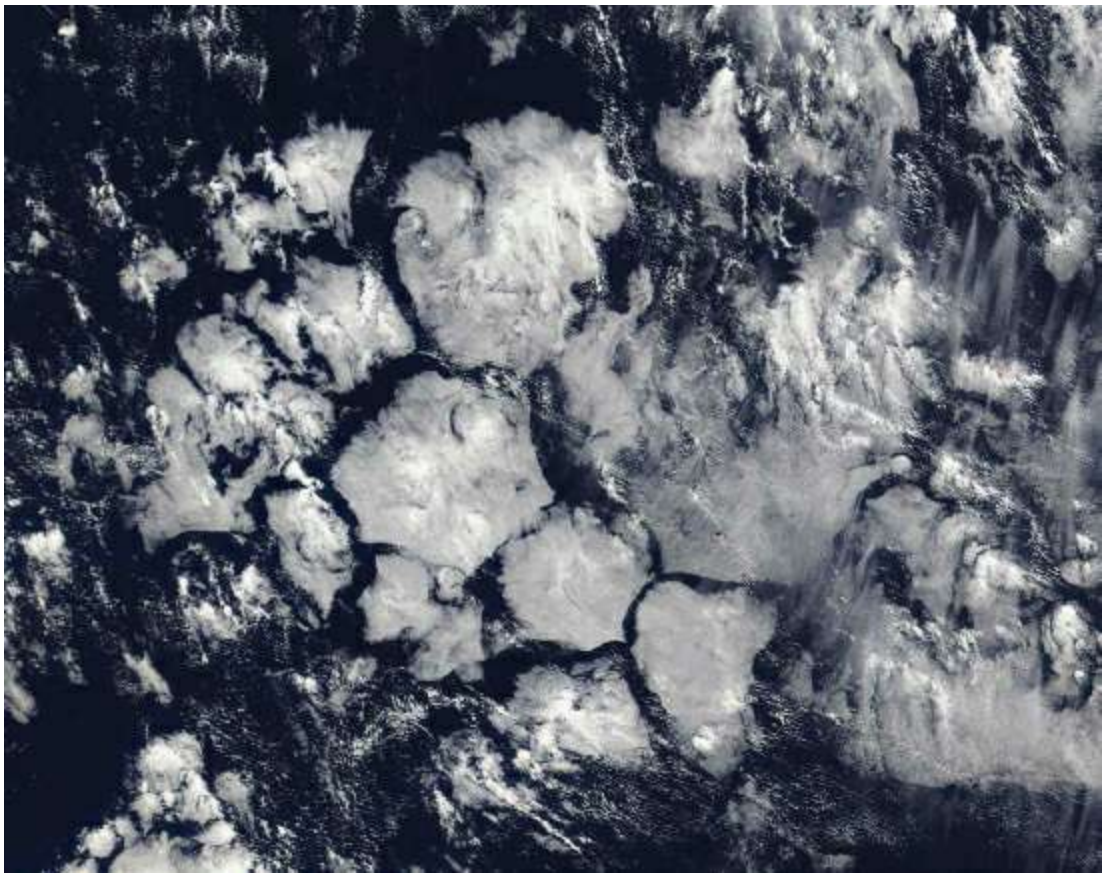
But what about the case of Lieutenant Taylor's compass? By the 1940s, the agonic line was already well west past the Bermuda Triangle, so what caused his malfunction? Generally speaking, navigators are able to account for magnetic declination in their calculations if they know where they are, but the transcript of Flight 19 suggests that Taylor was seriously lost and believed he was somewhere many hundreds of miles away from where he actually was. It is possible that Taylor mistook accurate readings from his two redundant compasses as wrong because he mistakenly believed he was somewhere he was not.

## Dropping the A(ir) Bomb

In 2016, newspapers around the United States declared that the mystery of the Bermuda Triangle may have been solved. Scientists analyzing an image that a satellite took over the Bahamas and the coast of Florida on the western edge of the Bermuda Triangle recognized something strange: the photo seemed to depict unusually shaped, hexagonal clouds, with diameters as large as 55 miles (88 km). According to Randall Cerveny, director of the meteorology department at Arizona State University, who also works for the United Nations' World Meteorological Organization, these clouds may be the result of a meteorological phenomenon known as microbursts or, as he called them, "air bombs." Microbursts are extremely strong, downward blasts of air that form as the result of cold air escaping from a thunderstorm. The wind speed of microbursts have been recorded in excess of 100 miles per hour (161 kilometers per hour)—approximately that of a category 2 hurricane. Like rogue waves, microbursts are relatively rare phenomena that can happen at any time and cause extreme damage to anything lying beneath them—such as ships or planes.

Nothing has been proven conclusively about the "honeycomb" clouds over the Bahamas, but that didn't stop news outlets from reporting it as the conclusive scientific explanation for the disappearances. Although it has been widely speculated that these clouds indicate similar high-powered

microbursts seen in the North Sea off the coast of Norway, it is not certain whether such phenomena occur in the Bermuda Triangle. The fact is that much remains to be explored and understood.



"Honeycomb" clouds such as these may be the telltale signs of powerful microbursts of wind, also known as "air bombs."

## IS THE BERMUDA TRIANGLE A HOAX?

The mystery of the Bermuda Triangle shares a number of similarities with other topics in the paranormal. Because the Bermuda Triangle has no clear explanation, many people believe that there are unexplainable forces at work there, drawing

associations to other paranormal subjects such as Bigfoot, UFOs, ghosts, and more. (It has been suggested that the disappearance of Flight 19 was a case of mass alien abduction, a theory which made an appearance in the 1977 science-fiction film *Close Encounters of the Third Kind*.) These theories have caused an equal and opposite skeptical pushback, with many people claiming that the Bermuda Triangle is a **hoax**.

Although the Bermuda Triangle is frequently associated with often-hoaxed paranormal topics, it is not itself a hoax because it has been the site of many true-life, well-documented shipwrecks, plane crashes, and disappearances. In addition, no one who was presumed to have disappeared in the Bermuda Triangle has since come forward to say that they faked their death.

At the same time, it is important to distinguish the lack of proof of a hoax as evidence that paranormal forces are at work in the Bermuda Triangle. Just because the Bermuda Triangle may not be a hoax doesn't necessarily mean that what happens there is caused by anything supernatural. It is simply a place where real tragedies have happened that are unexplained.

The iconic trilithons, or arches, that make up Stonehenge were built nearly five thousand years ago.

CHAPTER THREE

# The Hanging Stones

The sea is not the only source of the world's ancient mysteries; land has its own share of secrets. One of the oldest and perhaps the most famous in the whole world is Stonehenge, a prehistoric network of menhirs, or standing stone monuments, located in Wiltshire, England.

## Building Stonehenge

The distinctive stone structure known around the world was built in several stages spanning many thousands of years, and archaeological evidence of activity in the area dates back to well before the first stone was raised. Archaeologists have a relatively clear picture of the timeline of Stonehenge's construction by using a process known as **radiocarbon dating** on artifacts found at the site. Radiocarbon dating is a process in which a scientist can determine the age of an organic artifact, such as one of the many trowels made of antler bones that have been found at Stonehenge, by figuring out how much of the object's carbon has decayed. Because carbon decays at a certain rate, scientists can work backwards in order to approximate when an object was first created.

Scientists estimate the age of objects through carbon dating.

The first evidence of activity in the area around Stonehenge takes the form of earthworks. Archaeologists have discovered four or possibly five pits dating back to between 8500 and 7000 BCE. Archaeologists speculate that at least three of these pits may have been used to hold large, totem-like poles made of pine, perhaps similar to those built by Native American tribes in the Pacific Northwest of the United States.

Several thousand years later, around 3500 BCE, two complementary earthworks known as *cursus* monuments were built. These take the form of long, rectangular banks of dirt. The name “cursus” is a Latin word that was used by early British archaeologists, who thought that the rectangular banks were built by the ancient Romans as athletic fields—hence, *cursus*, or “course.” (Little did they know that the monuments they were studying dated back to many thousands of years before Rome was even founded.) The largest of the cursus earthworks is known as the Greater or Stonehenge Cursus and stretches 1.7 miles (2.7 km).

Around 3000 BCE, the first known structure of Stonehenge proper was

built. This consisted of a circular ditch with both an inner and outer bank of built-up dirt that is 328 feet (100 m) in diameter and surrounds the main site. On the inner side of the ditch are a series of holes that, archaeologists suspect, held standing stones.

The “cursus,” once believed to have been built by the ancient Romans, was recently discovered to predate them by several thousand years.

Approximately five hundred years after the circular ditch was built, the main structure of Stonehenge itself began to take shape. At this time, Stonehenge’s distinctive standing stones were erected. There are two types of pillar-like stones that make up Stonehenge: the larger sarsens and the smaller bluestones. Over the course of the next five hundred years, the bluestones and sarsens were arranged and rearranged, forming alternately concentric circles and then circles bounded by horseshoe-shaped structures, each of which comprise a series of three-piece arches called **trilithons**.

Few of the arches erected by the ancient builders stand today due to a number of factors over the millennia. Some have been deliberately knocked

down and broken up by cultures following Stonehenge’s builders, such as the ancient Romans and the medieval Britons, while others have fallen simply as the result of being worn by weather and time. Starting in the twentieth century, there have been a number of restoration projects that have attempted to re-erect the fallen stones.

Today, Stonehenge is cordoned off to the public by a low fence in order to protect against falling stones, though special tours are available outside of public hours that allow visitors to go directly up to the stones.

Guests visiting Stonehenge must keep a safe distance from the arches.

## THE NEOLITHIC GRAVEYARD

The name “Stonehenge,” like the monument it describes, is itself a puzzle. It is commonly thought to come from the Anglo Saxon words *stan* (stone) and *hengan*, meaning a precipice, such as a cliff, or to hang. Therefore, Stonehenge means “hanging stone.” Later writers have taken this etymology to mean that Stonehenge was designed to resemble a gallows—or perhaps was even used *as* a gallows. Perhaps this is why, they have suggested, Stonehenge has also been used as an ancient graveyard.

Indeed, many bodies have been discovered at Stonehenge. Archaeologists have discovered cremated human remains that were interred there as early as 5000 BCE, several thousand years before the first ditch structure was built. The earliest of these remains are found in one of fifty-six so-called Aubrey Pits, which are located just inside the earthwork ditch. Other gravesites are littered around the Stonehenge site, and one body seems to have been decapitated, possibly as a punishment for a capital crime.

Although evidence that Stonehenge was used—at least in part—as a burial ground is significant, archaeologists believe it is highly unlikely that it was a place of execution. For one thing, the decapitated corpse has been identified as an Anglo Saxon, one of ancient Britain’s many cultures, and dated back to around 1500 BCE—nearly a millennia since the stones were erected. Because of this, it is unlikely that neither the original builders of Stonehenge nor later civilizations that inhabited the area around it used the site for executions. Furthermore, most of the bodies found in and around Stonehenge were discovered under ceremonial burial mounds and were interred along with certain possessions that would have been prized among these ancient cultures, including especially fine pottery. The care with which these bodies have been buried at Stonehenge indicates that these were likely not thieves, murderers, and other criminals, but respected members of their culture.

Many of the bodies found near Stonehenge were buried alongside valuable artifacts, such as tools and pottery.

With Stonehenge predating history itself, archaeologists must dig to discover the truth.

CHAPTER FOUR

# Secrets in Stone

For as much as we know about the general timeline of Stonehenge's construction, there is still more that we do not know. The ancient Britons who constructed the megalith did not leave an owner's manual, so we are left to guess how and for what purpose it was built. Just as the uncertainty of what goes on under the surface or above the clouds of the Bermuda Triangle, the mystery of Stonehenge has fueled the imagination of countless people throughout the centuries.

## Ancient Engineering

Stonehenge has been recognized by the United Nations as a World Heritage Site because it is the largest and most architecturally sophisticated standing stone structure from the prehistoric era. There is no question that Stonehenge, with its massive stone pillars arranged in precise, concentric circles, is an engineering marvel; but considering that it was built thousands of years ago during a time when ancient humans had only rudimentary machines and simple stone tools, isn't Stonehenge so marvelous as to be an impossibility?

The size of the monumental stones at Stonehenge are mind-boggling. The bluestones weigh on average of 4 tons (3.6 metric tons) each—slightly

heavier than the average car—while the 30-foot (9 m) sarsens weigh 25 tons (22.6 metric tons)— approximately the same as a school bus, and the heaviest sarsen stones weigh in excess of 50 tons (45.3 metric tons).

Perhaps even more astounding than the sheer mass of the stones is the distances that they were transported before being erected at Stonehenge. Archaeologists have discovered that the larger sarsen stones were quarried in Marlborough Downs near Avebury, in north Wiltshire, approximately 20 and 30 miles (32 to 48 km) north of the site. Meanwhile, archaeologists have pinpointed the source of the bluestones to the Priseli Hills, located in Pembrokeshire, Wales—*140 miles* (225 km) away.

How could the ancient Britons possibly transport, lift, and precisely place these multi-ton stones after transporting them in excess of a hundred miles? To some, the answer is simple: they didn't. There is a theory among certain people that many of the ancient world's greatest architectural achievements were actually accomplished by extraterrestrial visitors—in other words, aliens. This theory, known as the ancient astronaut theory, maintains that ancient humans lacked the tools and knowledge necessary to build the likes of Stonehenge and the Egyptian and Mayan pyramids; instead, they were helped along by well-meaning alien visitors. The ancient astronaut theory has been popularized in particular by the History Channel's *Ancient Aliens* program.

Twentieth-century reconstruction projects used machines to lift the massive stones, but how did the ancient Britons accomplish such a feat?

The ancient astronaut theory makes for a good story, but it is universally accepted to be false by the scientific community. The construction of Stonehenge, as incredible of a feat as it is, was well within the capability of ancient peoples. Although the sarsens and bluestones would have been too heavy to transport using timber rollers, archaeologists have concluded that it was possible for a team of ancient people to pull each one along using ropes and a greased wooden sled—albeit slowly. Meanwhile, the stones could have been erected using a crude pulley system, and the crossbeams, known as lintels, put into place by building up an earthen ramp around the standing stones. Although the whole process would have been slow-going and labor-intensive, ancient humans were resourceful and determined.

## Stonehenge's Significance

Clearing up how Stonehenge was built raises yet another question: Why

would ancient people go through so much trouble to build Stonehenge? There have been a number of theories of Stonehenge's significance (including the outlandish idea that it was built as a landing site for alien spacecraft). Most of the more realistic explanations center around ancient spirituality and religion. Many of the earliest excavations of Stonehenge, such as the Duke of Buckingham's 1620 dig in the center of the monument, uncovered charred remains of both humans and animals. This discovery points to Stonehenge being used, at least in part, as both a burial site as well as a place for ritual sacrifice.

Many have also observed that the position of Stonehenge corresponds with the two yearly **equinoxes**, which generally mark the beginning of spring and fall. On these days, the rising sun aligns with archways, which may have signified to people gathered at Stonehenge when to sow and reap their harvests. This theory holds that Stonehenge served as a sort of celestial computer or calendar that helped ancient people track the movement of the sun and the passage of the seasons. Given the degree to which ancient people were tied to agriculture, this moment may have held spiritual significance for them.

Although it seems possible or even likely that Stonehenge held some sort of religious significance, it is still unclear exactly what the primary purpose of the megalith was. According to R.J.C. Atkinson, archaeologist from University College, Cardiff, Wales, "Most of what has been written about Stonehenge is nonsense or speculation. No one will ever have a clue what its significance was."

The arrangement of Stonehenge's arches corresponds with the equinox.

## WIZARD WORKS

The questions of who built Stonehenge and how has puzzled people for millennia. One of the oldest theories about its construction was proposed in the early twelfth century by the British historian Geoffrey of Monmouth. In 1136, Geoffrey wrote in the *Historia Regum Britanniae* (*History of the Kings of Britain*) that the mythical wizard Merlin, the famous advisor to King Arthur, was responsible for Stonehenge.

According to the *History*, Merlin proposed to the king of England that a monument be erected to mark the graves of the slain princes and kings who had died during the war between the Britons and the Saxons. Merlin recommended that a structure situated in Ireland known as the Giant's Dance, also called the Giant's Ring, be relocated to the south of England. The Giant's Dance, Geoffrey wrote, was originally built by giants who carried stones from Africa. The king agreed and commissioned Merlin and thousands of men to do so. (The Irish, for their part, refused to relinquish their cultural heritage and mounted an army to defend the Dance, but the British defeated them.) When it came time to dismantle the stones, the men found that they could not budge a single one through their combined strength. Merlin laughed and turned his magical abilities on the ring, dismantling it himself stone by stone. When it was rebuilt in England, it was renamed Stonehenge.

In addition to being the oldest, Geoffrey of Monmouth's Merlin theory is also one of the longest held. Many medieval writers and historians believed Geoffrey of Monmouth's version to be true, and it was widely accepted until about the sixteenth century.

## MANHATTANHENGE

Stonehenge is not the only monument to embrace the sunset at set points during the year. Manhattan, one of the five boroughs that make up New York City, also features the ability to chart the passage of time. In the early 1800s, New York City's common council passed the Commissioners' Plan of 1811, which established the rectangular grid plan that continues to define Manhattan's geography. The plan set forth a system of (generally) regular north-south–running avenues and east-west– running streets. Many praise the ease with which even a non-native can navigate New York's streets, and the Commissioners' Plan is widely considered one of the greatest achievements in urban planning.

Because Manhattan's streets run east-west, that means that there are two points in the year where the sun shines directly down their broad pavements. Instead of stone menhirs as at Stonehenge, however, the sun that shines in Manhattan is bordered by huge concrete, steel, and glass buildings, giving rise to the term "Manhattanhenge."

Manhattanhenge's "solstices" happen to be Memorial Day (end of May) and baseball's All-Star break (mid-July). Just as the solstices are presumed to have had significance to the early Britons, perhaps the scholars that come after us to study the lost city of Manhattan will presume that these dates held special meaning for the people of New York. According to Neil deGrasse Tyson, "Future anthropologists might conclude that, via the Sun, the people who called themselves Americans worshiped War and Baseball."

“Manhattanhenge” is a unique sight to behold.

There is much that remains unexplained about Stonehenge, so archaeologists will continue to dig for answers.

CHAPTER FIVE

# Mysteries Persist

Science has yet to explain everything. In a world where everything seems to be mapped, documented, and recorded, there continue to be enduring mysteries all around us.

Although the Bermuda Triangle may not be unique among the world's oceans, the number of tragedies that have happened there are still significant, and each one seems to defy easy explanation. Perhaps what is most frightening about this expanse of sea named the Devil's Triangle is not that there is any one creature, entity, or phenomenon that happens here, but several. Between towering rogue waves, deadly gusts from "air bombs," confounding mechanical malfunctions, and human error, there are any number of factors that may spell disaster on the open ocean. Because its waters hold their secrets in their dark depths, we may never know for sure. The mysteries of the Bermuda Triangle, along with the rest of the oceans that cover 75 percent of our world, will continue to draw us in, and we must be careful not to be swallowed up in them.

Not all of the world's unexplained places are natural. Some, such as Stonehenge, were made by people. They are monuments to cultures that, though lost to time, have nevertheless left their mark on the world. How exactly our ancient ancestors built and used these structures continues to go unexplained. Instead, we are left with evidence that people—just like any of

us—accomplished seemingly impossible feats. Stonehenge, like the pyramids, is part of humanity's legacy. It is not only a monument of a people who have gone before us but also a testament to what people can achieve.

There may not be any inter-dimensional portal in the Bermuda Triangle or some supernatural power at Stonehenge. There may not be anything special about the explained places of the world—except those things that make the world itself special.

Stonehenge will continue to astound and intrigue us.

# GLOSSARY

**anthropology** The field of science that deals with the origins and development of humanity.

**capsize** To overturn, especially a boat.

**cremate** A funeral rite in which a dead body is burned and reduced to ashes.

**equinox** One of two days on which the path of the sun passes Earth's equator, signifying the beginning of spring (vernal) and fall (autumnal).

**hoax** An intentional attempt to deceive someone.

**log** A record of events throughout a journey.

**megalith** An ancient stone monument.

**menhir** A monumental stone standing either alone or with others.

**oceanographer** A person who studies the ocean.

**phenomenon** Something that is observed to exist or happen but whose cause is unknown or uncertain.

**radiocarbon dating** The process of determining the age of an organic object (something with carbon) by measuring the amount of carbon that has decayed.

**rogue wave** A spontaneously appearing wave of enormous height and power.

**skeptic** A person who doubts the claims of another.

**squall** A sudden, violent windstorm, usually associated with storms on the sea.

**trilithon** A structure consisting of two vertical standing stones with a horizontal stone placed overtop of them; common among megalithic architecture.

# FURTHER INFORMATION

## Books

Konstam, Angus. *Ghost Ships: Tales of Abandoned, Doomed, and Haunted Vessels*. London, UK: Lyons Press, 2005.

Pearson, Mike Parker. *Stonehenge: A New Understanding: Solving the Mysteries of the Greatest Stone Age Monument*. New York: The Experiment, 2013.

Pearson, Mike Parker, Joshua Pollard, Colin Richards, Julian Thomas, and Kate Welham. *Stonehenge: Making Sense of a Prehistoric Mystery.* London, UK: Council for British Archaeology, 2016.

Quasar, Gian J. *Into the Bermuda Triangle: Pursuing the Truth Behind the World's Greatest Mystery*. New York: International Marine/McGraw Hill, 2004.

## Websites

### English Heritage: Stonehenge

http://www.english-heritage.org.uk/visit/places/stonehenge/history

This site features a historical overview of Stonehenge from construction to modern-day, high-resolution photographs, a map of the site, and more.

### The History Channel: The Bermuda Triangle

http://www.history.com/topics/bermuda-triangle

The History Channel offers this excellent primer to the history, science, and

mysteries of the Bermuda Triangle.

### Naval Air Station Fort Lauderdale Museum: The Disappearance of Flight 19 Visual Exhibit

http://www.nasflmuseum.com/flight-19-exhibit.html
The Naval Air Station Museum in Fort Lauderdale, Florida, maintains this website showcasing primary source material associated with the disappearance of Flight 19.

## Videos

### Nova: Secrets of Stonehenge

http://www.pbs.org/wgbh/nova/ancient/secrets-stonehenge.html
This episode focuses on the mysteries surrounding Stonehenge.

### World of Mysteries: The Bermuda Triangle

https://www.youtube.com/watch?v=WLMq5nkmyRM
Watch this video that discusses happenings around the Bermuda Triangle.

# BIBLIOGRAPHY


Ashliman, D. L. “Stone Monument Legends.” University of Pittsburgh, January 25, 2010. http://www.pitt.edu/~dash/monuments.html#merlin.

Brennan, Capt. Lawrence B. “The Unanswered Loss of the USS *Cyclops*.” Naval Historical Foundation, June 13, 2013. http://www.navyhistory.org/2013/06/unanswered-loss-uss-cyclops-march-1918.

Caesar, Ed. “What Lies Beneath Stonehenge?” Smithsonian.com, September 2014. http://www.smithsonianmag.com/history/what-lies-beneath-Stonehenge-180952437.

Conradt, Stacy. “The Quick 10: 10 Incidents at the Bermuda Triangle.” Mental Floss.com, June 6, 2008. http://mentalfloss.com/article/18797/quick-10-10-incidents-bermuda-triangle.

Fritz, Angela. “The ‘Bermuda Triangle mystery’ isn’t solved, and this scientist didn’t suggest it was.” *Washington Post*, October 25, 2016. https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/10/25/the-bermuda-triangle-mystery-isnt-solved-and-this-scientist-didnt-suggest-it-was.

“History of Stonehenge.” English Heritage.org.uk, http://www.english-heritage.org.uk/visit/places/stonehenge/history.

“How Was Stonehenge Built?” *Stonehenge: The Age of the Megaliths*. Bradshaw Foundation.com, http://www.bradshawfoundation.com/stonehenge/construction.php.

“Lynch, Thomas, Jr., (1749–1779).” Biographical Directory of the United States Congress: 1774–Present.” Congress.gov,

http://bioguide.congress.gov/scripts/biodisplay.pl?index=L000535.

McDonell, Michael. “Flight 19: ‘Lost Patrol.’” *Naval Aviation News*. Naval History and Heritage Command, June 1973. https://www.history.navy.mil/browse-by-topic/disasters-and-phenomena/flight-19/flight-19-lost-patrol.html.

“The North Atlantic Gyre.” European Space Agency. Accessed October 26, 2016, https://www.esa.int/SPECIALS/Eduspace_Weather_EN/SEM1HYK1YHH

Owen, James. “Stonehenge Was Cemetery First and Foremost, Study Says.” National Geographic News, May 29, 2008. http://news.nationalgeographic.com/news/2008/05/080529-stonehenge-cemetery.html.

Pearson, Mike Parker. *Stonehenge: A New Understanding: Solving the Mysteries of the Greatest Stone Age Monument*. New York: The Experiment, 2013.

Quasar, Gian J. *Into the Bermuda Triangle: Pursuing the Truth Behind the World’s Greatest Mystery*. New York: International Marine/McGraw Hill, 2004.

“Skeleton Challenges Ideas on Stonehenge.” ABC News, July 15, 2016. http://abcnews.go.com/Technology/story?id=120110&page=1.

“Stonehenge.” Encyclopedia Britannica, https://www.britannica.com/topic/Stonehenge.

“Stonehenge ‘bluestone’ quarries confirmed 140 miles away in Wales.” University College London, December 7, 2015. https://www.ucl.ac.uk/news/news-articles/1215/071215-stonehenge-bluestone-quarries.

Tyson, Neil deGrasse. “Manhattanhenge.” American Museum of Natural History, http://www.amnh.org/our-research/hayden-planetarium/resources/manhattanhenge.

Weisberger, Mindy. “No, ‘Honeycomb’ Clouds Don’t Explain Bermuda Triangle Mystery.” LiveScience.com, October 24, 2016. http://www.livescience.com/56622-bermudatriangle-air-bombs-not-likely.html.

“What is the Sargasso Sea?” National Ocean Service, November 3, 2015. http://oceanservice.noaa.gov/facts/sargassosea.html.

“What is a rogue wave?” National Ocean Service, December 8, 2014. http://oceanservice.noaa.gov/facts/roguewaves.html.

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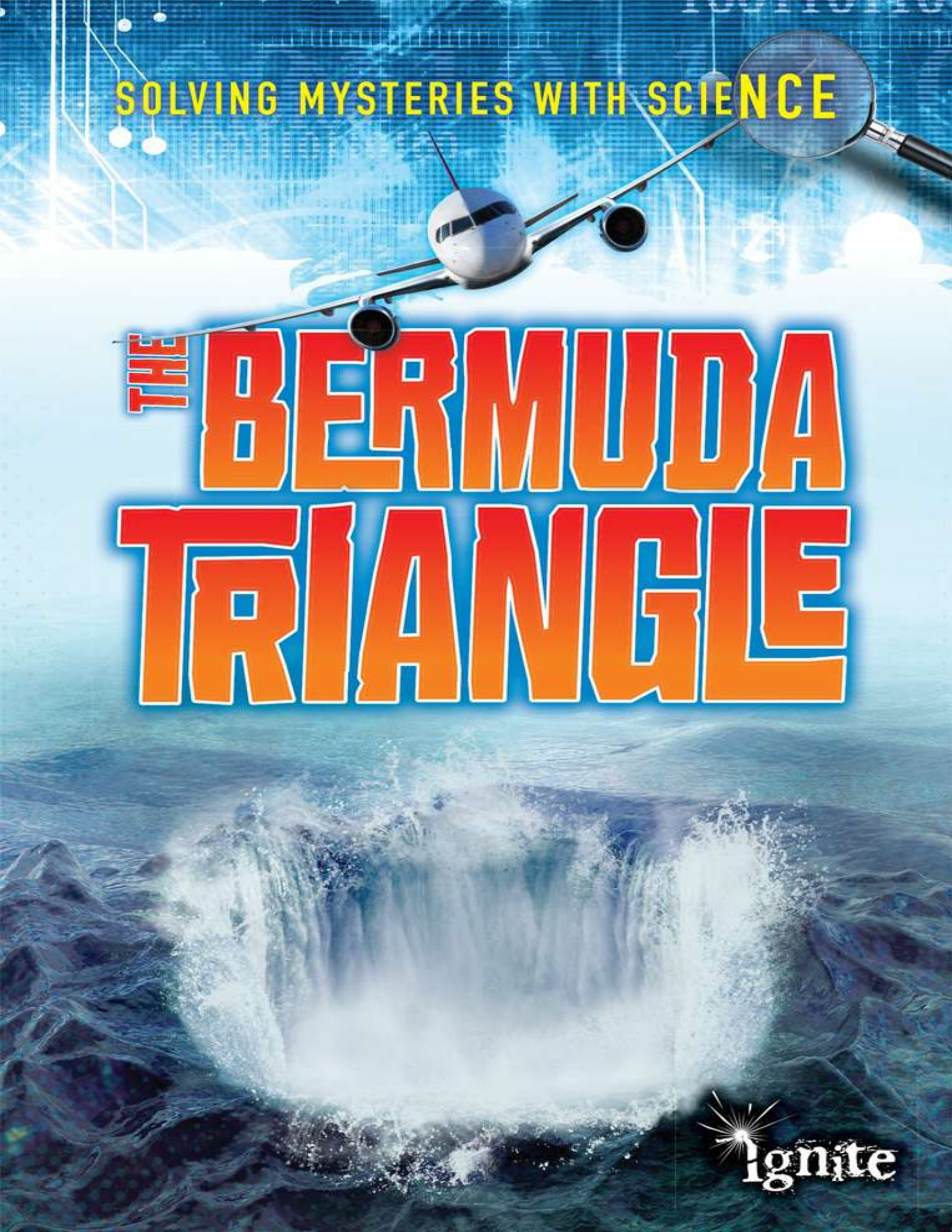
**Andrew Coddington** has written a number of books for Cavendish Square Publishing on a variety of topics, including history and the paranormal. In addition to *The Bermuda Triangle, Stonehenge, and Unexplained Places*, he has also written *Aliens, UFOs, and Unexplained Encounters* and *The Hope Diamond, Cursed Objects, and Unexplained Artifacts* in the Paranormal Investigations series. He lives in Buffalo, New York, with his wife and dog.


SOLVING MYSTERIES WITH SCIENCE
THE BERMUDA TRIANGLE
Ignite

SOLVING MYSTERIES WITH SCIENCE

# THE BERMUDA TRIANGLE

Raintree

Chicago, Illinois

# CONTENTS

What Is the Bermuda Triangle?
The Fate of Flight 19
Disappearing Crews
Terror in the Clouds
Investigating the Triangle
Weird Weather?
An Unusual Ocean?
Scientific Explanations?
Aliens and Atlantis?
Human Causes?
Is There Really a Mystery?
Can the Mystery Be Solved?
*Timeline*
*Summing Up the Science*
*Glossary*
*Find Out More*
*Index*

# WHAT IS THE BERMUDA TRIANGLE?

For centuries, travelers have feared the stretch of Atlantic Ocean known as the Bermuda Triangle. Dozens of ships and planes have disappeared inside this mysterious region never to be seen again. Inside the Bermuda Triangle, storms blow up from nowhere, pilots and sailors become lost and confused, and the laws of nature seem to be suspended. No one is safe in these waters. Or so it seems...

## Where is the Bermuda Triangle?

The area of ocean known as the Bermuda Triangle covers roughly 500,000 square miles (1.3 million square kilometers). It lies between three points: Miami Beach, in Florida, the town of San Juan, Puerto Rico, and the island of Bermuda. Many small islands lie inside the Triangle, but for most of its expanse it is simply uninterrupted water.

## Many theories

Dozens of theories have been put forward to explain the mystery of the Bermuda Triangle. Some people blame freak storms, giant waves, or strange fogs and gases. Others think unusual force fields are at work, making compasses swing wildly out of control. Some people claim that the buried city of Atlantis has a mysterious power over the waters above it. Some writers have even suggested that ships and planes are snatched up by aliens

and beamed to another planet!

## Can the mystery be solved?

In the first part of this book, you can learn about the fate of people who have perished inside the Triangle. You can also read the chilling account of a pilot who managed to survive a near-death experience.

The second part of this book takes a careful look at the theories behind the disappearances and asks some questions. Do the theories make sense? Have the so-called experts approached the problem in a scientific way? And can science solve the mystery of the Bermuda Triangle?

### MANY NAMES

The Bermuda Triangle has been called the Sea of Doom, the Graveyard of the Atlantic, and the Devil’s Triangle.

**The area known as the Bermuda Triangle covers roughly 500,000 square miles (1.3 million square kilometers). It lies between the island of Bermuda, San Juan in Puerto Rico, and Miami in Florida.**

# THE FATE OF FLIGHT 19

On the afternoon of December 5, 1945, 13 young men gathered at Fort Lauderdale, Florida. They were the crew of Flight 19, a squadron of five U.S. navy planes. They were preparing for a routine training exercise led by their instructor, Lieutenant Charles Taylor.

## A SIMPLE EXERCISE

As the pilots waited on the runway, they ran through the steps of their exercise. First, they would fly east for 56 miles (90 kilometers). Then, they would release their training bombs into the sea. They would then continue east for another 67 miles (108 kilometers), before changing course and heading north for 73 miles (117 kilometers). Finally, they would turn southwest and fly the 120 miles (193 kilometers) back to their base in Fort Lauderdale.

The whole operation would last just two hours. The weather was fine, and all five planes had been thoroughly checked.

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What could possibly go wrong?

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## “I DON’T KNOW WHERE WE ARE...”

At first, everything went according to plan. The crews took off at 2:10 p.m., completed their bombing practice, and continued flying east. But then a disturbing silence filled the airwaves.

Up until this time, the planes had been in regular contact with base. But nothing was heard from Flight 19 for 40 long minutes. Meanwhile, the weather was changing and heavy black clouds were gathering overhead.

At last, another pilot who was flying nearby picked up a signal. Lieutenant Robert Cox tuned his radio and heard Lieutenant Taylor talking to one of his pilots. Cox felt his blood run cold as he heard the chilling words, “I don’t know where we are. We must have got lost after that last turn.” Something had gone horribly wrong.

## “IT LOOKS LIKE WE ARE ENTERING WHITE WATER!”

Cox tried desperately to contact Taylor, but it was 20 minutes before he heard his voice on the radio again. This time, Taylor sounded panicked and confused. His compass had failed, and he thought he might be flying over an area called the Florida Keys. Cox responded fast, telling Taylor to head north toward the Florida coast.

It was good advice, but it did not work. In less than five minutes, Taylor radioed back saying he couldn’t see land. Then some other voices came over the radio. This time, there was no mistaking their sense of fear. One of the men said desperately, “We’re completely lost!” Another shouted out in alarm, “It looks like we are entering white water!”

Flight 19 seemed to be heading straight for disaster. What exactly was this patch of white water? And where could it be? There was nothing anyone could do to help.

## INTO THE VOID

By 5:00 p.m., it was horribly clear that Taylor was losing his grip on reality. He was no longer listening to radio instructions. Instead, he issued a series of confusing commands. First, he ordered his students to fly due east. Forty minutes later, he turned the squadron (group of planes) around and headed west. But after just a few minutes, he turned east again. Radio signals slowly died away, and Flight 19 was never seen again...

## DISASTER STRIKES AGAIN

Shortly after 5 p.m., two seaplanes set off to search for Flight 19. Less than half an hour later, the crew of a nearby oil tanker heard a deafening explosion. Gazing up at the sky, they watched in horror as a burning seaplane plummeted into the sea. All 13 airmen died instantly. The deadly Bermuda Triangle had claimed another set of victims.

# DISAPPEARING CREWS

Many strange things have happened inside the Bermuda Triangle. But one of the weirdest of all took place over a century ago. Back in the winter of 1881, the crew of a ship called the *Ellen Austin* saw a sight they would never forget...

## A MYSTERIOUS MIST

It was over a month since the *Ellen Austin* had left England, heading for the United States. The crew had suffered a rough winter crossing, and they heaved a sigh of relief as they sailed past the Bahamas. They were all looking forward to an easy voyage home.

But almost as soon as they entered the Bermuda Triangle, a mysterious mist descended over the ocean. Cautiously, the crew sailed onward, when suddenly the lookout boy gave a startled cry of “Ship ahoy!”

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Peering through the mist, the sailors could just make out a tall and graceful schooner sailing toward them.

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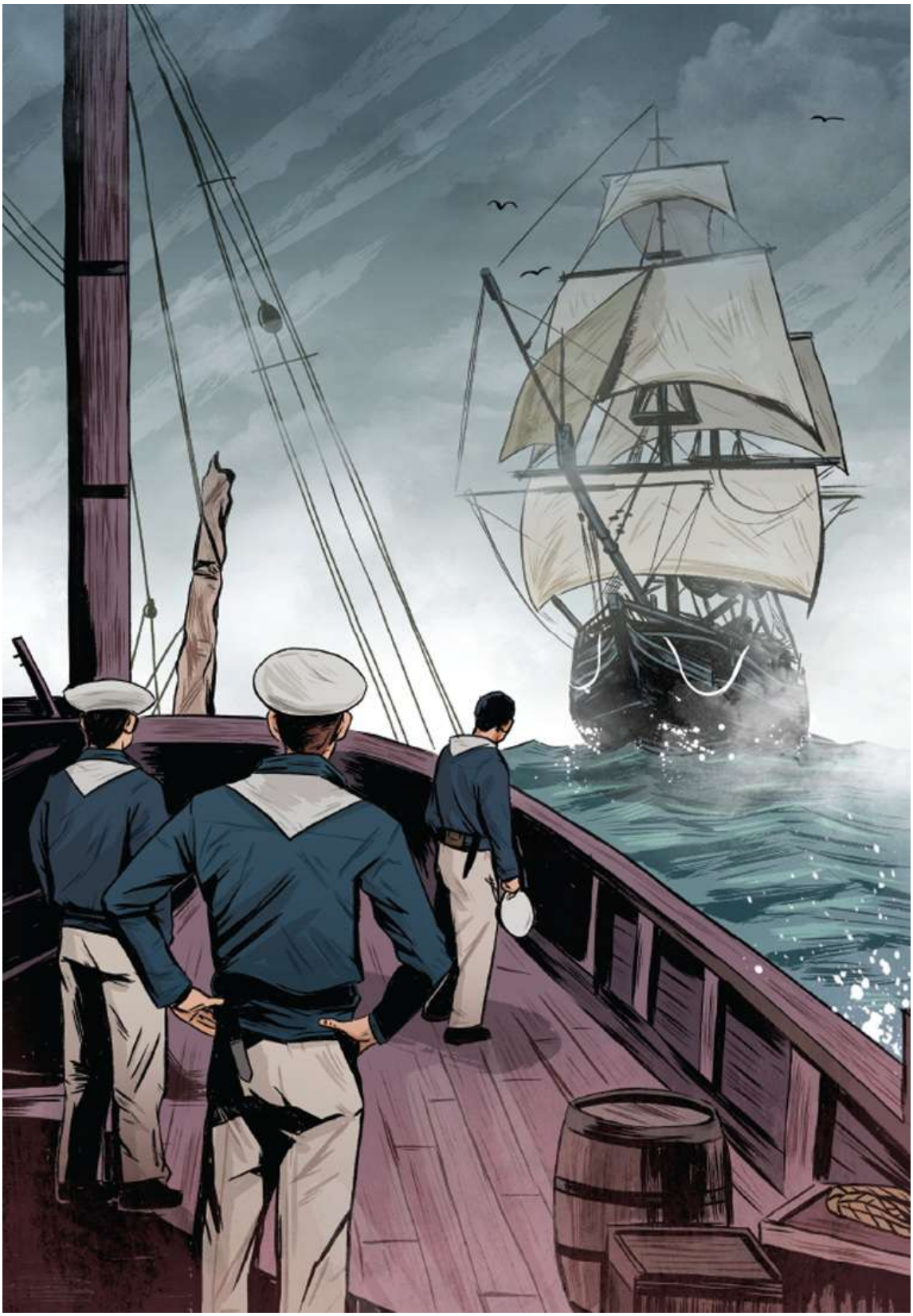

## A GHOSTLY SHIP

The sailors let out a cheer and waited for an answering shout. But nothing came. All that could be heard was the creaking of timbers as the schooner sailed on silently through the waves.

Gradually, the mist cleared, and the ship came into view. The sailors rubbed their eyes. Could it really be true? There was no crew on board, but the schooner was sailing smoothly. Slowly, the horrible truth dawned on them. They were staring at a ghost ship!

## "BOARD THAT SHIP!"

On board the *Ellen Austin*, the sailors gazed at the ghost ship in horror. What could have happened to the unlucky crew? It was a mystery. But they knew they needed to get away as fast as they could.

Unfortunately, their captain had other ideas. "Board that ship!" he ordered. "I want a crew of my finest men to sail it to New York."

## THE SHIP IS LOST

Soon the ghost ship had a new crew and was sailing beside the *Ellen Austin*. But it was not out of danger. Without any warning, a violent storm blew up, and both ships were rocked by powerful winds. After two days, the storm finally died down. But when the crew of the *Ellen Austin* looked around for the ghost ship, it was nowhere to be seen.

For the next few days, the *Ellen Austin* sailed the waters of the Bermuda Triangle, searching for the missing schooner.

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Each day, the crew scanned the ocean with sinking hearts, certain that the ship must have been wrecked.

## VANISHED INTO THIN AIR

Eventually, the captain gave orders to head for home, when suddenly a shout came from the lookout boy. The crew strained their eyes and saw the sight they had been longing for. A familiar ship came sailing calmly toward them, totally undamaged by the storm.

The sailors burst into cheers of joy. But soon their cries of delight changed to gasps of horror. As the ship came nearer, they saw that once again it was deserted—all their fellow crew members were gone. Scrambling on board, the sailors found the ghost ship in perfect order. There was no sign that the men had left in a panic.

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They had simply vanished into thin air…

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# TERROR IN THE CLOUDS

It was a clear, sunny day in December 1970 when Bruce Gernon prepared his small plane for takeoff. He was taking two passengers on a sightseeing flight around the Bahamas. But what started off as a pleasure trip rapidly descended into a nightmare.

## OMINOUS CLOUDS

As he left the runway, Gernon noticed a weird-looking cloud straight in front of him. He climbed steeply to avoid it, but it was keeping up with him, rising higher and higher until it completely surrounded his plane.

For 10 anxious minutes, Gernon plowed through the cloud, until at last his plane emerged into clear skies.

---

He breathed a sigh of relief, but the flight's problems had only just begun.

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A second cloud was forming directly ahead of the plane, rising out of the sea like an inky tower.

## TRAPPED IN THE CLOUDS

As soon as Gernon entered the cloud, everything went black. Then blinding flashes of light lit up the sky. He had flown through plenty of storm clouds before, but this was different—and he knew he had to get out fast.

Swerving sharply, he broke into a clear patch of sky. But then he realized he had not escaped. The plane was trapped inside a tube of clouds, and the walls of the tube were closing in on it!

## A GAP IN THE CLOUDS

For the next few desperate minutes, Gernon struggled not to panic, until he spotted something that gave him hope—a tiny gap in the wall of cloud.

Gernon headed quickly for the gap. But then, in front of his eyes, it started changing shape. Slowly, the gap changed into a perfect circle, forming the entrance to a tunnel. He aimed straight for the circle, but it was shrinking fast. Could he and his passengers make it out alive?

## OUT OF THE TUNNEL

It felt like Gernon and his passengers would never reach the end of the tunnel, but at last they were out. Looking back, Gernon gasped out loud as he saw the circle turn into a slit and then disappear. Then he forced himself to concentrate on the dangers ahead.

## AN "ELECTRONIC FOG"

The plane was surrounded by a grayish haze. All of Gernon's navigation instruments (electronic tools to help him find his way) had failed, and his compass was spinning gently, even though he was flying straight.

---

Desperately, he contacted the communication tower to find out his position,

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but no one could locate him. The plane seemed to be lost inside an electronic fog.

## TRAVELING THROUGH TIME?

Gernon continued flying blind for three long minutes, until a voice crackled over his radio, saying, "We've located your plane over Miami Beach,

Florida.”

Gernon checked his watch. It was incredible. He had been flying for less than 40 minutes, and yet he had covered a distance that usually took him an hour and a half. Had he managed to travel through some kind of time warp?

Meanwhile, his view was finally starting to clear. He rubbed his eyes in amazement as Miami Beach came into view. Minutes later, he was landing his plane. The flight would haunt him for the rest of his life.

# INVESTIGATING THE TRIANGLE

Can the mystery of the Bermuda Triangle be solved? People have put forward a range of different theories to explain the strange events that take place inside the Triangle. But do these theories stand up to investigation? The next six chapters will consider the theories and put them to the test of science and common sense.

## Is there really a mystery?

Some people claim that all the weird events can be explained by science or common sense. You can read their arguments on pages 40 and 41.

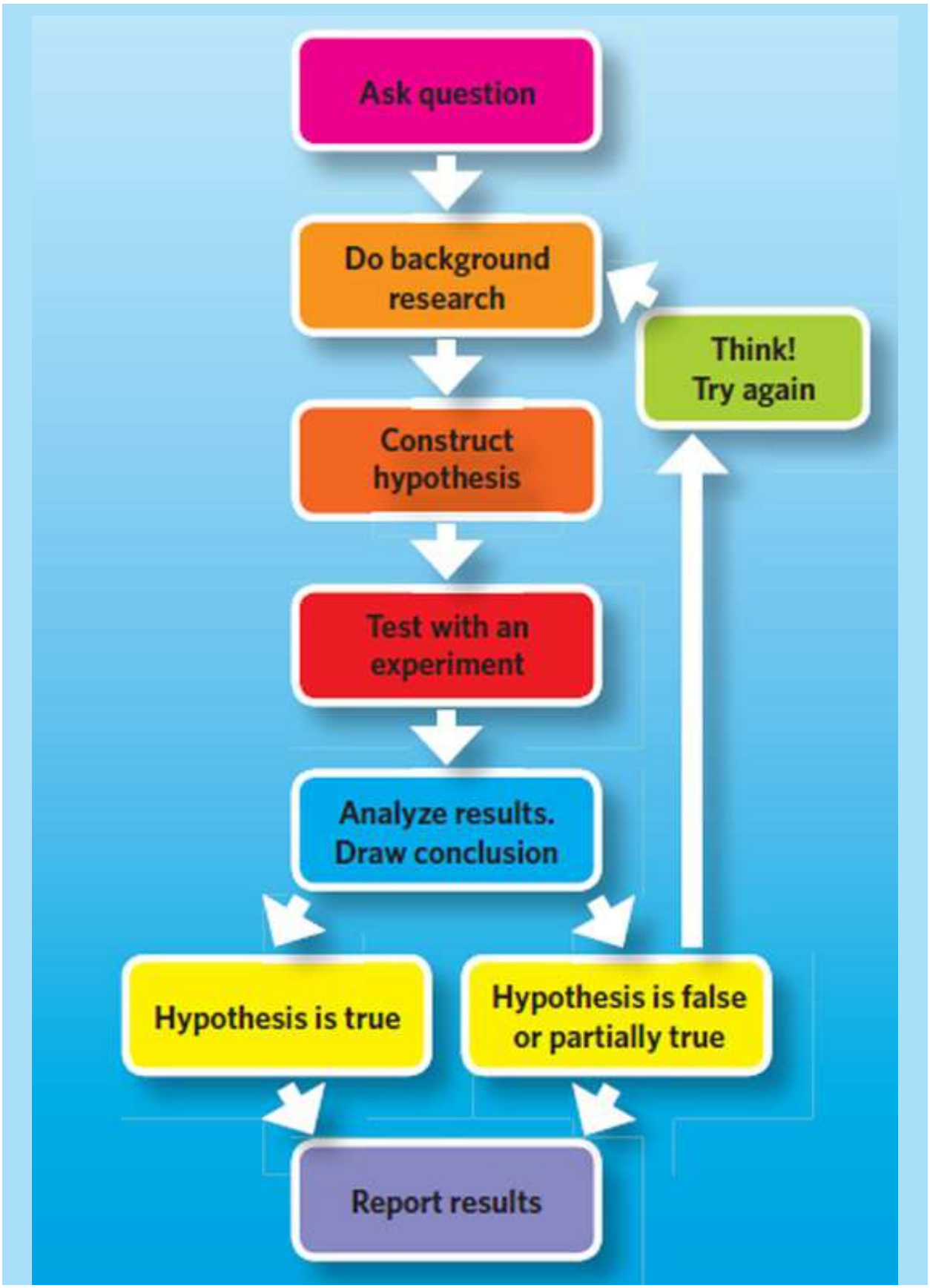
# The Triangle is born

There have been reports of weird events in the Bermuda region for centuries. But it was not until the 1950s that the idea of a deadly "Bermuda Triangle" was born. In 1952, a U.S. journalist named George X. Sand wrote an article for *Fate*, a magazine that investigated unexplained events. Sand listed several ships and planes that had disappeared in "a watery triangle bounded roughly by Florida, Bermuda, and Puerto Rico." His article led to a surge of theories about the Bermuda Triangle. Interest in the Triangle reached its peak in the 1970s, but some investigators are still at work today.

# THE SCIENTIFIC METHOD

Good investigators follow the scientific method when they need to establish and test a theory. The scientific method has five basic steps:

1. Make observations (comments based on studying something closely).
2. Do some background research.
3. Form a testable hypothesis. This is basically a prediction or “educated guess” to explain the observations.
4. Conduct experiments or find evidence to support the hypothesis.
5. After thinking carefully about the evidence draw conclusions.


Ask question
Do background research
Think! Try again
Construct hypothesis
Test with an experiment
Analyze results. Draw conclusion
Hypothesis is true
Hypothesis is false or partially true
Report results

# WEIRD WEATHER?

Accounts of strange events in the Triangle often include descriptions of very unusual weather. Survivors have described mysterious fogs, mists, and clouds, flashing lights in the sky, and terrifying winds or waves that seem to come from nowhere. Many reports of disasters stress that people started a journey on a perfectly calm day and then met weird weather with no warning at all. This chapter will investigate unusual weather in the Triangle area.

# Myth-buster

## Mysterious mists?

People who write about the Triangle often mention the spooky character of the mists and fogs that suddenly surround a ship or plane. But are they really so mysterious? Thick mists and fogs are very common in the Triangle region. They are caused when warm air meets cold water. The water in the air is forced to cool rapidly and forms small droplets, creating a mist or fog that hovers over the ocean.

**Thick sea mists are a common sight inside the Bermuda Triangle.**

**This satellite image shows a powerful hurricane swirling over the ocean.**

## Storms at sea

The Bermuda Triangle region is battered by frequent tropical storms, also known as hurricanes or cyclones. Tropical storms can develop over the ocean with very little warning, and winds can quickly pick up speed to 40 miles (64 kilometers) per hour or more. A ship or plane caught inside a cyclone is suddenly surrounded by whirling wind and thunderclouds and hit by driving rain. Cyclones at sea also create gigantic waves, putting ships and boats in great danger.

## Normal or paranormal?

Some investigators claim that the weird weather in the Triangle is a sign that paranormal forces are at work. But is this hypothesis correct? In fact, the Triangle area is well known for its extreme and changeable weather. It is not unusual for brilliant sunshine and clear blue skies to be replaced in minutes by terrifying thunderstorms and violent winds.

## Waterspouts

Stormy weather over tropical seas can result in a waterspout. Waterspouts are formed when low thunderclouds make contact with the ocean, creating a vertical (up-and-down) column of spinning cloud. They travel over the ocean at speeds of up to 40 to 50 miles (64 to 80 kilometers) per hour, picking up any floating objects in their path.

Waterspouts can pose a serious threat to swimmers and small boats. They may have caused some unexplained disasters in the Triangle area.

**Waterspouts are very common in the Bermuda Triangle. In fact, the ocean around the Florida Keys is sometimes called "the waterspout capital of the world."**

# Myth-buster

## Faulty forecasts

Writers often claim that the weather forecast was clear at the time of a disappearance in the Triangle. But weather forecasts cannot accurately predict what happens out at sea. Even today, with satellite cameras, it is easy to fail to spot storms at sea. There is a 12-hour gap between the time a weather satellite passes over a specific spot on the globe until the time it passes again. During these hours, a brief but violent storm can develop out at sea and then run out of power.

## Rogue waves

Rogue waves strike out of the blue. They are at least double the size of all the waves around them. Some have been estimated to be as tall as 80 feet (24 meters)—the height of an eight-story building. Rogue waves can cause enormous damage, even sinking ocean liners. Oceanographers (people who study oceans) believe that some disappearances in the Triangle could have been the result of an encounter with a rogue wave.

## HOW ARE ROGUE WAVES FORMED?

No single cause has been discovered for rogue waves, but it is thought that they are linked to powerful ocean currents. A current called the Gulf Stream (see page 25), which runs through the Bermuda Triangle, is a possible cause of rogue waves in the region.

# AN UNUSUAL OCEAN?

Many Triangle investigators have pointed out the strange character of the ocean in this region. Some have described how vessels have been caught in powerful currents and sent completely off course. Some have noted blue holes on the ocean floor around the Bahamas and claimed that they could be portals (entrances) to another world. A few imaginative writers have told dramatic tales of attacks by sea monsters or killer seaweed. All these elements sound very mysterious, but can they in fact be explained by science?

## Myth-buster

## Sea monsters or sharks?

No evidence has been found of mysterious sea monsters in the waters of the Bermuda Triangle area, but this part of the North Atlantic Ocean is home to deadly sharks and vicious fish called barracudas. The tiger shark and the bull shark are both native to the area and are greatly feared because of their attacks on swimmers.

## Caught in the Gulf Stream

One of the world's most powerful ocean currents runs through the Bermuda Triangle. The Gulf Stream runs through the Gulf of Mexico and travels northeast past the Florida coast on its way to the northern North Atlantic Ocean. This fast-moving stream of warm water measures up to 50 miles (80 kilometers) wide and has a very powerful pull on all surface vessels. Boats caught in the Gulf Stream can be swept many miles off course. To add to the dangers, towering waves often form on

either side of the current.

## The strange Sargasso Sea

Close to the center of the Bermuda Triangle is a large area of very calm water covered by floating seaweed. The seaweed is called sargassum, and the area that it covers is called the Sargasso Sea. The Sargasso Sea spreads over an area of roughly 2 million square miles (5.2 million square kilometers) and is surrounded by currents on all sides.

Some people who write about the Bermuda Triangle have described the Sargasso Sea as a place of great horror, where vessels can get caught in huge tangles of weed. In fact, sargassum weed forms small, floating patches that even small boats can pass through easily.

**The deepest-known blue hole in the world is Dean’s Blue Hole, close to Long Island, in the Bahamas. It is 663 feet (202 meters) deep.**

## Wormholes or caves?

Blue holes look like circular patches of deep-blue water. In the 1990s, some Triangle investigators claimed that these blue holes were entrances to wormholes—secret tunnels leading to another world. However, in the past 30 years, deep-sea divers have begun to investigate blue holes. They have found that the holes are in fact deep underwater caves.

# PROFESSOR WHEELER'S WORMHOLES

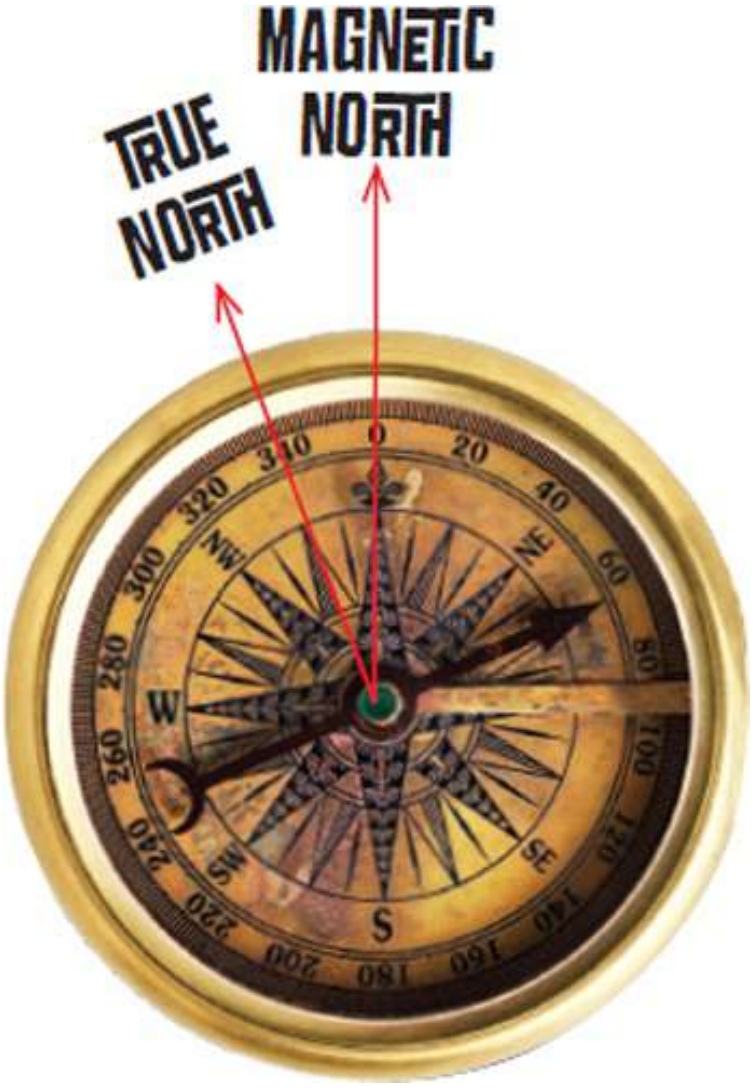
In 1957, John A. Wheeler, a professor at Princeton University, introduced his theory of wormholes in the universe. He described imaginary wormholes that connect different dimensions of time and space.

Wheeler's wormholes became very popular with science fiction writers, who used them in their stories. The writers described secret tunnels that were used by aliens from outer space to reach people on Earth. However, Professor Wheeler saw his "wormholes" as an abstract idea, meaning they existed only as part of his theory of time and space. He never suggested that they were real tunnels under the sea.

# SCIENTIFIC EXPLANATIONS?

Some investigators have tried to find a scientific solution to the Triangle mystery. According to one theory, faulty compass readings are to blame for some of the disasters. Another theory proposes that boats and planes may have been sunk by gases that erupted (burst out) from under the ocean floor. But is there clear evidence to support these theories?

**Can some disasters in the Bermuda Triangle be blamed on errors in navigation?**




**Old-fashioned navigators relied on calculating the difference between magnetic north and "true north." This could be confusing in the Triangle area.**

## Compass trouble

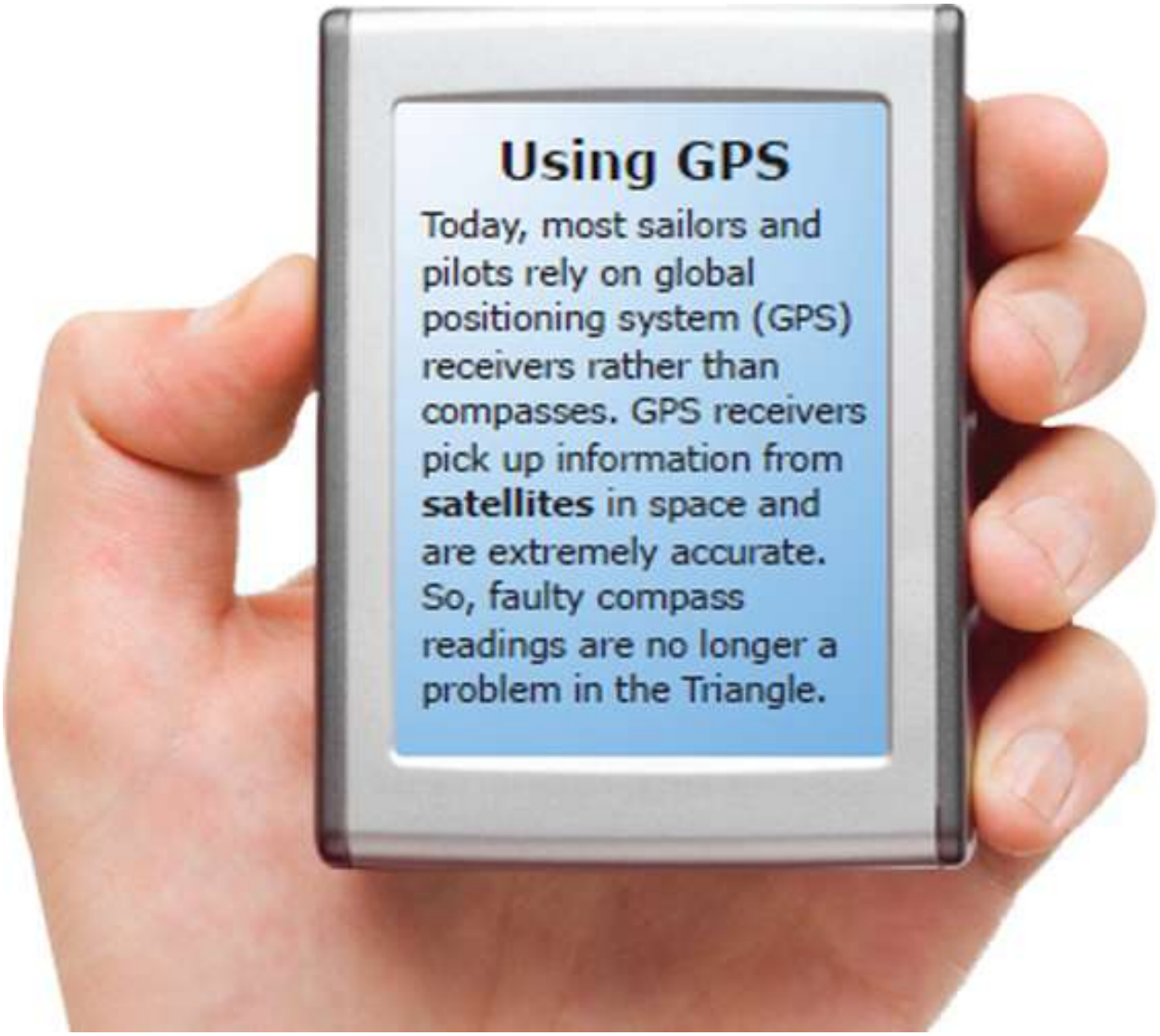
Up until the end of the 1900s, sailors and pilots relied on compasses to chart their course. They used their compass to show them the direction of "magnetic north." Then they calculated the direction of true north and all the other compass directions.

In most parts of the globe, the distance between magnetic north and true north is quite large. This means that navigators need to make an adjustment

to calculate true north. However, in the region close to the Equator, the difference between magnetic and true north is so small that navigators do not need to make their usual adjustment.

## Navigation errors?

Is it possible that some navigators in the Bermuda Triangle became confused, and forgot that they should not make their usual compass adjustment? Or would most experienced sailors be aware that they needed to use their compass in a different way in this region?


Using GPS
Today, most sailors and pilots rely on global positioning system (GPS) receivers rather than compasses. GPS receivers pick up information from satellites in space and are extremely accurate. So, faulty compass readings are no longer a problem in the Triangle.

**Deep-sea divers have discovered pockets of gas trapped under the ocean floor.**

## Bubbles of gas

Is it possible that exploding bubbles of gas caused some of the disappearances inside the Triangle?

Divers have discovered that there are huge amounts of methane gas (known as methane hydrates) trapped underneath the ocean floor. When the pressure inside these pockets builds up, gas escapes in bubbles and erupts on the surface of the ocean.

## Danger from bubbles

Bursting bubbles of gas could put ships and boats in danger. A ship could be sucked beneath the surface. Even planes could be at risk. If the methane gas came into contact with heat from a plane’s engines, the

plane could easily burst into flames.

## Where's the evidence?

There is evidence that vessels have been affected by exploding gas bubbles. Several oil-drilling platforms have collapsed because of releases of gas on the ocean floor. In 2000, divers off the east coast of Scotland found a trawler (a large fishing boat) resting inside a crater filled with methane gas. It is believed that it had been sunk by an enormous bubble of gas.

## TESTING THE THEORY

In 2003, scientists at Monash University in Australia conducted an experiment to test the hypothesis that a vessel could be sunk by a bubble of gas. Using a tank and boat made of Perspex (a hard, clear plastic), they observed the effect of bubbles on the boat. By following the scientific method, the scientists came to the conclusion that the boat could be sunk.

**In April 2010, there was a huge explosion on board the Deepwater Horizon oil platform. The explosion was probably caused by a bubble of methane gas escaping from under the ocean bed. This blast caused a massive oil spill.**

# ALIENS AND ATLANTIS?

In the late 1960s and early 1970s, John Wallace Spencer, Charles Berlitz, and Richard Winer all wrote books about the Triangle that included paranormal explanations. One theory claimed that the missing ships and planes could have been abducted (stolen away) by aliens from other planets. This theory was very popular with science fiction fans, but can it stand up to the test of science?

**Were ships in the Triangle really beamed up to space by aliens?**

## Stolen by aliens?

People who believe in UFOs say that these spacecraft could have the power to beam up ships and planes. But they do not present any evidence for their theory.

It has also been suggested that aliens might use wormholes to draw their victims into another world. You can read about wormholes on page 27.

**Some writers have claimed that aliens kidnapped the members of Flight 19 (see pages 6 to 9). The movie director Steven Spielberg used this theory as the basis of his science fiction movie *Close Encounters of the Third Kind*.**

## UFOs in the Triangle?

Is it possible that aliens visit the Triangle in their spacecraft? There have been many reports of unidentified flying objects (UFOs) in the region. One of the best-known sightings took place in 1971, when members of the crew of the USS *John F. Kennedy* reported seeing a glowing disc hovering over the sea. However, their ship did not experience any problems in the Triangle.

When investigations are carried out into sightings of UFOs, investigators usually discover that people have been confused. They may have seen an unusual cloud formation. Or they may have spotted a meteor, which is a piece

of rock that falls from space and burns up as it enters Earth's atmosphere. Yet, despite this evidence, some people remain convinced that alien spacecraft really exist.

## The power of Atlantis?

Some people claim that the legendary kingdom of Atlantis holds the key to the mystery of the Bermuda Triangle. According to ancient legend, Atlantis was buried under the ocean thousands of years ago. It has been suggested that the kingdom of Atlantis could lie directly beneath the Bermuda Triangle.

Some people claim that the people of Atlantis have never died. They believe that these ancient people are still living under the ocean today. They also suggest that the people of Atlantis could be using their

mysterious powers inside the Bermuda Triangle.

## Evidence from Atlantis?

An American man named Edgar Cayce claimed he could talk directly to the people of Atlantis, and between the years 1924 and 1944 he revealed many “messages” from them. Cayce claimed that the people of Atlantis were beaming rays of energy from a mysterious crystal. He also predicted that researchers would discover the western edge of Atlantis near the coast of Bimini Island, in the heart of the Bermuda Triangle.

## Proof from Atlantis?

In 1968, divers found ruins on the ocean floor close to Bimini. The ruins seemed to be part of an enormous city wall. Some people believed that the ruins were proof that Atlantis had once existed under the Bermuda Triangle. However, most geologists (scientists who study rock) think that the wall of rock was formed by nature.

In 1975, a diver named Dr. Ray Brown claimed that he found a temple shaped like a pyramid in the ocean near Bimini. Inside the temple was a crystal ball, which Brown brought back to the surface. He kept the crystal a secret for several years before displaying it to “believers.” The believers claimed it had very unusual powers.

**Is there evidence beneath the Atlantic Ocean that Atlantis really did exist?**

# HUMAN CAUSES?

Is it possible to blame human behavior for most of the disasters in the Triangle? Bad decisions or carelessness have certainly played a part in many accidents inside the Triangle. Other possible causes of “disappearances” are piracy and warfare. This chapter will consider all these explanations.

## A bad decision

Even very experienced navigators sometimes make mistakes—especially in difficult weather. On January 1, 1958, businessman Harvey Conover sailed his yacht, the *Revonoc*, directly into a storm. Unsurprisingly, Conover and his yacht were never seen again. Some journalists blamed the disappearance on mysterious forces, but others came to the conclusion that simple human error was to blame. It appeared that Conover had made the wrong decision to brave the storm and trust in his own skills.

**Some of the disasters that happened in the Triangle must have been the result of simple human error.**

**These coast guardsmen examine two life preservers and a foghorn from the sunken *Marine Sulphur Queen*. Some writers claimed the sinking of this tanker in 1963 was a mystery "disappearance." In fact, the tanker was unfit to go to sea. One crew member called it "a floating garbage can."**

## A careless crew

In 1972, the tanker *V. A. Fogg* suddenly exploded off the Florida coast. Some reporters claimed that the mysterious Triangle had claimed more victims. But these claims were disproved when local coast guards conducted a thorough investigation. The investigation revealed that the crew had failed to follow the proper method for cleaning out benzene, a very dangerous gas, from the

ship's tanks.

## MISTAKES ON FLIGHT 19

Human error was probably to blame for the fate of Flight 19 (see pages 6 to 9). An investigation revealed that the flight instructor, Charles Taylor, was not familiar with the Triangle region, and he had a history of sometimes being a careless navigator.

## Pirates

Some disappearances inside the Triangle may have been the work of pirates. Until the 1900s, piracy was common in the Caribbean and the surrounding areas. Any ship with a valuable load was at risk from pirates, who would board the ship, kill the crew, and take everything they could. Sometimes pirates took over a ship. Sometimes they simply left it to drift.

## PIRATES ON THE GHOST SHIP?

People have suggested that the "ghost ship" found by the crew of the *Ellen Austin* had been attacked by pirates, who stole the ship's cargo and killed the crew. (See pages 10 to 13 for this story.) However, the crew of the *Ellen Austin* reported that the ghost ship was not damaged in any way. There was no evidence that it had been attacked by pirates.

## Smugglers

Since the 1970s, drug smugglers have been active in the Caribbean and Bermuda Triangle regions. These smugglers sometimes steal pleasure boats to transport illegal drugs from Central America to the United States. Smugglers may have been involved in some disappearances of yachts and crews inside the Triangle.

## Fighting at sea

Many losses inside the Triangle have happened in times of war. Records from World War I (1914–1918) and World War II (1939–1945) give war-related explanations for the loss of dozens of ships and planes inside the Bermuda Triangle. However, the fate of three U.S. ships has never been completely explained.

The U.S. ship *Cyclops* disappeared in 1918, during World War I, and the *Proteus* and *Nereus* both vanished in 1941, during World War II. Some writers have claimed that the disappearance of these three ships is a mystery. But it is possible that they were attacked and sunk by German submarines.

**Could German submarines have sunk three U.S. ships, which appeared to have vanished without a trace?**

# IS THERE REALLY A MYSTERY?

Some investigators have asked the question: Is there really a mystery to be solved? Then they have made a careful examination of the evidence.

## Checking the facts

People who believe in the mystery of the Triangle list a large number of "disappearances." But is there hard evidence for these events? Investigators, such as pilot and librarian Larry Kusche, have double-checked the newspaper reports of the time. They have discovered that many of the ships recorded as "missing without a trace" were in fact later reported to be found again.

## Comparing records

Investigators have also compared the list of "disappearances" with the records for shipping in the region. They have checked the reports of local coast guards, who note all shipwrecks and accidents at sea. Some investigators have also examined the records of ship insurers, who pay out money to owners of ships that are damaged or lost. These investigations reveal that many reports of "disappearances" cannot be proven.

# Myth-buster

## Accident black spot?

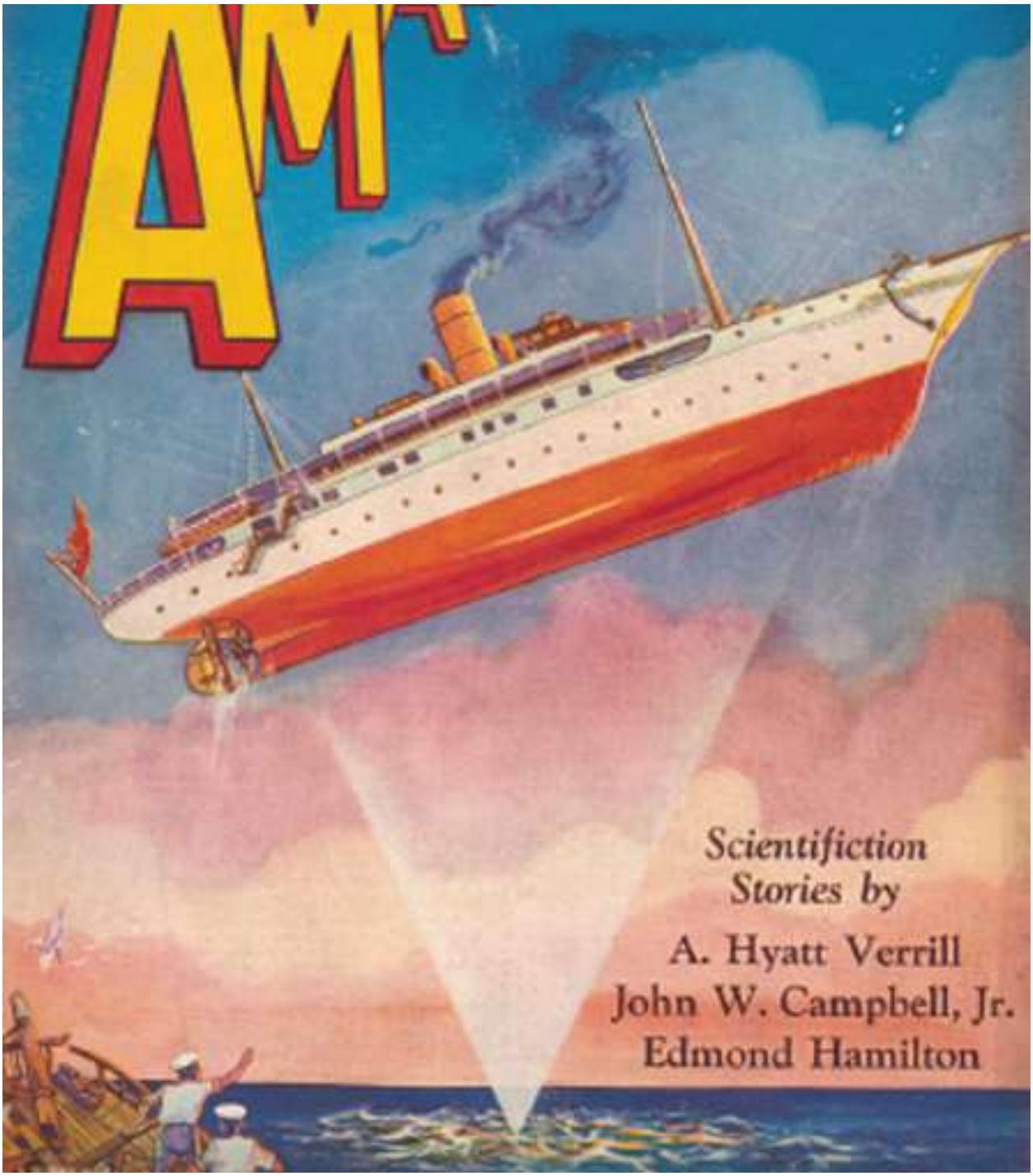
The Triangle area is one of the busiest transportation zones in the world, providing the main route between North America and the Caribbean. Considering the amount of traffic in the area, the number of accidents is surprisingly low.

## Looking at the bigger picture

It is often claimed that the Bermuda Triangle has an unusually high number of accidents. But is this claim really true? Investigators have calculated the amount of traffic passing through the region and compared this figure with the number of reported accidents. They have reached the conclusion that the accident rate in the Triangle is no higher than in any other region of the world.

# CAN THE MYSTERY BE SOLVED?

This book has examined a range of responses to the mystery of the Bermuda Triangle. But which ideas make the most sense to you?




**Some theories about the Bermuda Triangle are very exciting. But do they stand up to the tests of science and common sense?**

# All sorts of solutions

Do you think the disappearances can be explained by the weird weather in the region? Do you think the ocean is partly to blame, with its treacherous currents and hungry sharks? Can some accidents be blamed on problems with compass readings? And is it possible that bubbles of methane gas could cause some disasters?

Some people prefer a more imaginative approach to the mystery. Does the answer lie in wormholes leading to another dimension of time and space? Or could the disappearances be due to aliens or “death-rays” from Atlantis?

Finally, there is the suggestion that human beings have caused most of the disasters in the Triangle. Are bad decisions and carelessness to blame? And were some disappearances acts of piracy or war?

There is also the suggestion that the mystery does not in fact exist. The evidence presented on pages 40 to 41 suggests that many apparent facts about “disappearances” and other events cannot be proved.

## A scientific approach

The best way to approach all these theories is to apply the scientific method. Ask yourself: Can the theory be tested? What evidence is used to construct the hypothesis, and can it be trusted? Once you have asked these questions, you can reach a conclusion.

You may decide that several of the theories provide good explanations for the strange events in the Triangle. Or you may reach the conclusion that there is no mystery to be solved. In the end, you must make up your own mind about the question of the Bermuda Triangle.

# TIMELINE

**1881**
The crew of the *Ellen Austin* meet a ghost ship in the Bermuda Triangle.

**1918**
The U.S. ship Cyclops disappears in the Triangle area.

**1924**
Edgar Cayce starts to reveal his “messages” from Atlantis.

**1941**
The U.S. ships Proteus and *Nereus* disappear.

**1945**
U.S. Navy training Flight 19 disappears.

During the search for Flight 19, a seaplane explodes.

**1948**
The airliner *Star Tiger* disappears.

**1949**
A DC3 passenger plane disappears.

**1952**
Journalist George X. Sand introduces the idea of the Bermuda Triangle.

**1955**
The pleasure yacht *Connemara IV* is found adrift with no crew.

**1958**
Harvey Conover and his yacht, the *Revonoc*, disappear.

**1963**
The U.S. tanker *Marine Sulphur Queen* disappears.

**1964**
Vincent Gaddis writes an article called “The Deadly Bermuda Triangle,” listing many mysterious incidents.

**1969**
John Wallace Spencer publishes *Limbo of the Lost*, introducing the theory of alien abductions (kidnappings).

**1970**
Pilot Bruce Gernon flies into an “electronic fog” but survives.

**1972**
The tanker *V. A. Fogg* explodes off the Florida coast.

**1974**
Charles Berlitz publishes *The Bermuda Triangle*, and Richard Winer publishes *The Devil’s Triangle*. Both books explore paranormal explanations for the Triangle mystery.

**1975**
Larry Kusche writes *The Bermuda Triangle Mystery: Solved*, in which he disproves most of the Triangle theories.

**1993**
A company called Equinox produces a TV documentary providing explanations for the Bermuda Triangle.

# SUMMING UP THE SCIENCE

Stormy weather is the cause of many accidents in the Bermuda Triangle. But why are storms in this region so severe?

## Tropical weather

The Bermuda Triangle lies in the region called the tropics. This is an area on either side of the equator (an imaginary line around Earth), between the Tropic of Cancer and the Tropic of Capricorn. Within the tropics, the weather is very hot, and powerful winds blow across the ocean. There are frequent storms at sea, caused by differences in air temperature as cool winds meet warm water. These usually take a circular form and are known as **tropical cyclones**.

## How do tropical cyclones form?

Cyclones form when layers of cool air blow across warm water. Warm air rising up from the ocean is caught up in the winds and whirled around rapidly. The droplets in the air cool to form cloud, and the clouds grow heavy and produce rain. The cyclone hovers just above the waves and is blown across the ocean by surface winds.

# GLOSSARY

**blue hole** entrance to an underwater cave, which looks from the surface like a circular patch of deep-blue water

**compass** instrument (tool) used for finding directions with a magnetic needle that always points north

**conclusion** decision that is made after gathering and testing evidence

**crew** team of people who all work together, especially on a ship or plane

**current** powerful flow of water in an ocean or a river

**cyclone** very strong wind blowing in a spiral (cone shape)

**dimension** space in which things happen

**disprove** prove or show that something is not true

**electronic** relating to electricity. Electronic machines work by using small amounts of electricity.

**erupt** burst out with great force

**evidence** information and facts that help to prove something

**experiment** scientific test to try out a theory

**ghost ship** ship with nobody on board that seems to have a crew of ghosts

**hypothesis** idea that a scientist suggests and then tries to prove

**magnetic north** place on the globe that all magnets point to. The position of magnetic north is gradually moving, but it is over 1,000 miles (1,600 kilometers) away from the North Pole.

**methane** type of gas made by living things when they rot and decay

**navigator** someone who steers a ship or a plane, using instruments (tools) such as a compass

**paranormal** not normal and not easily explained by the laws of nature

**piracy** act of being a pirate and attacking ships at sea in order to steal their goods

**predict** say what will happen in the future

**satellite** machine that is sent into orbit around Earth

**schooner** old-fashioned sailing ship, with many masts and sails

**science fiction** stories about life in the future or life on other planets

**scientific method** way of testing a theory, using evidence and experiments, before reaching a conclusion

**tanker** ship with large tanks that is used to carry liquids or gases

**theory** idea that aims to explain something

**time warp** kink or bend in time that makes time behave very strangely

**treacherous** looking safe, but actually being very dangerous

**tropical** relating to the hot, rainy area on either side of the equator, between the Tropic of Cancer and the Tropic of Capricorn

**vessel** any kind of ship or boat

**wormhole** tunnel that may lead into surprising places

**yacht** large sailing boat

# FIND OUT MORE

## Books

DeMolay, Jack. *The Bermuda Triangle: The Disappearance of Flight 19* (Jr. Graphic Mysteries). New York: PowerKids, 2007.

Walker, Kathryn. *The Mystery of Atlantis (Unsolved!)*. New York: Crabtree, 2010.

West, David, and Mike Lacey. *The Bermuda Triangle: Strange Happenings at Sea* (Graphic Mysteries). New York: Rosen, 2006.

## Web sites

**adventure.howstuffworks.com/bermuda-triangle.htm**
This site explores possible explanations for the Triangle mystery.

**www.bermuda-triangle.org/html/introduction_to_the_bermuda_tr.html**
This large site was created by a "believer" in the mystery of the Triangle, and it
contains many stories of strange events.

**www.crystalinks.com/crystalpyr.html**
This site was created by a "believer" in the city of Atlantis and its connection to the
Triangle mystery.

**news.nationalgeographic.com/news/2002/12/1205_021205_bermudatriang**
This National Geographic site examines the Bermuda Triangle, discussing key
mysterious events and possible explanations.

## Movies

*Close Encounters of the Third Kind* (Columbia: 1977, 2002)
This science fiction movie by Stephen Spielberg is based on the fate of Flight 19.

# INDEX

abductions 32, 44
accident rate 41
aliens 4, 27, 32, 33, 44
Atlantis 4, 34, 35, 44

Bahamas 10, 14, 24
barracudas 24
benzene gases 37
Berlitz, Charles 32, 44
Bimini Island 35
blue holes 27
Brown, Ray 35

Cayce, Edgar 35, 44
clouds 14, 15, 20, 21, 22, 33, 45
compasses 4, 8, 16, 28, 29
*Connemara IV* 44
Conover, Harvey 36, 44
Cox, Robert 8
currents 23, 24, 25, 26
cyclones. *See* tropical storms.

*Ellen Austin* 10, 12–13, 38, 44
evidence 19, 24, 31, 32, 33, 35, 38, 40, 43

*Fate* magazine 19
Flight 19 squadron 6, 8–9, 33, 37, 44
fog 4, 16, 20, 44

Gaddis, Vincent 44
gases 4, 28, 30, 31, 37
geologists 35
Gernon, Bruce 14, 15, 16, 44
ghost ships 12–13, 38, 44
global positioning system (GPS) 29
Gulf Stream 23, 25

hurricanes. *See* tropical storms.
hypotheses 19, 21, 31, 43

Kusche, Larry 40, 44

lights 15, 20
location 4

*Marine Sulphur Queen* 37, 44
meteors 33
methane gas 30, 31
mist 10, 12, 20

newspaper reports 40
nicknames 4

oceanographers 23

piracy 36, 38

*Revonoc* 36, 44
rogue waves 23

Sand, George X. 19, 44
Sargasso Sea 26
satellites 22, 29

scientific method 19, 31, 43
sea monsters 24
searches 9, 13, 44
sharks 24
smugglers 39
Spencer, John Wallace 32, 44
*Star Tiger* 44

Taylor, Charles 6, 8–9, 37
theories 4, 19, 27, 28, 31, 32, 42, 43, 44
timeline 44
time travel 16
tropical storms 21, 45

unidentified flying objects (UFOs) 32, 33
USS *Cyclops* 39, 44
USS *John F. Kennedy* 33
USS *Nereus* 39, 44
USS *Proteus* 39, 44

*V. A. Fogg* 37, 44

warfare 36, 39
waterspouts 22
waves 20, 21, 23, 25
weather. *See* clouds; fog; mist; tropical storms; waterspouts; winds.
Wheeler, John A. 27
winds 12, 20, 21, 45
Winer, Richard 32, 44
wormholes 27, 32